



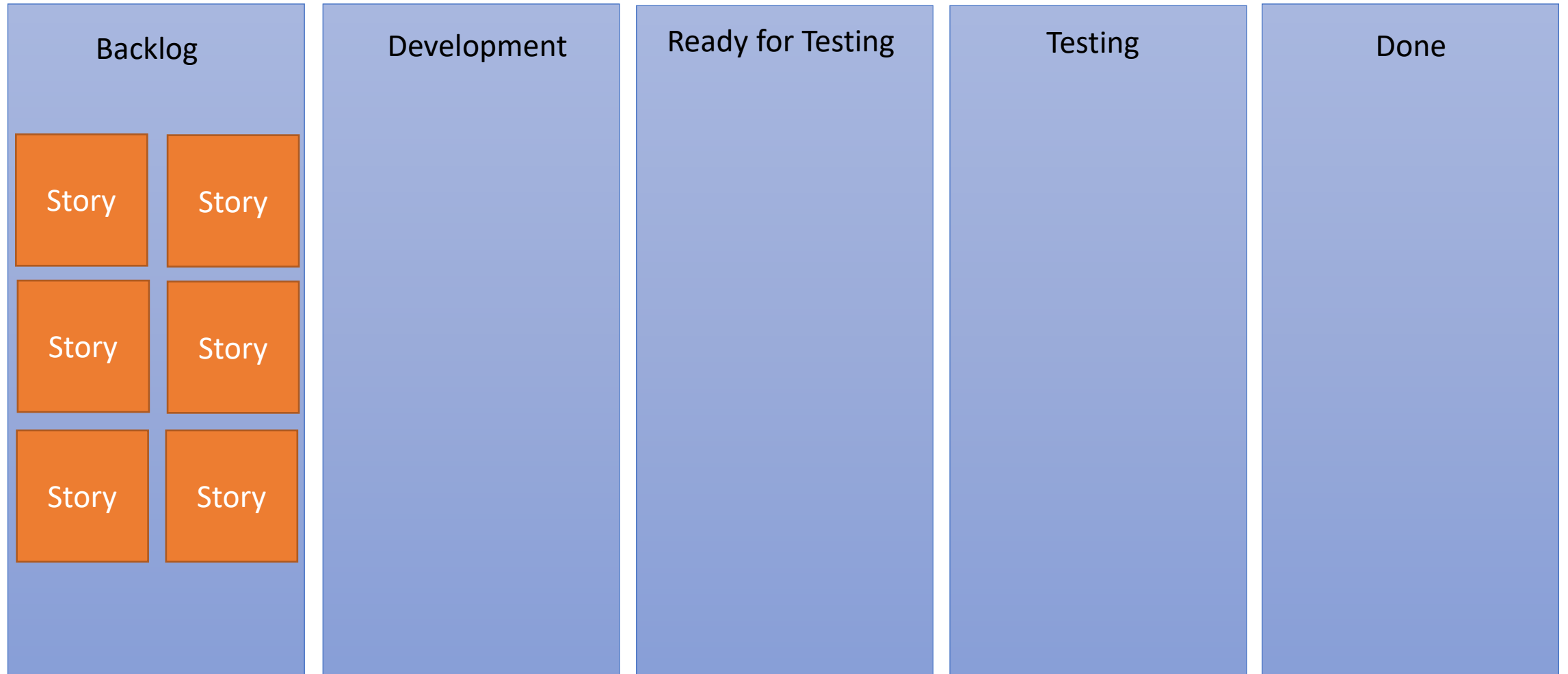
Unleash Agility with the Theory of Constraint's Five Focusing Steps

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Have you seen this?



Learning Outcomes for Today

- **Improve Workflow:** Develop strategies for smoother workflows, improved team performance, and heightened innovation within your Agile teams.
- **Understand TOC and Its Five Steps:** Gain an understanding of the Theory of Constraints and its five focusing steps.
- **Apply TOC in Agile:** Learn to apply TOC principles within an Agile context and the synergies between TOC and Agile, focusing on improving team performance and business outcomes.
- **Navigate Constraints:** Master the process of identifying and managing constraints within an Agile team, turning potential obstacles into opportunities for growth.

Unveiling to the Theory of Constraints

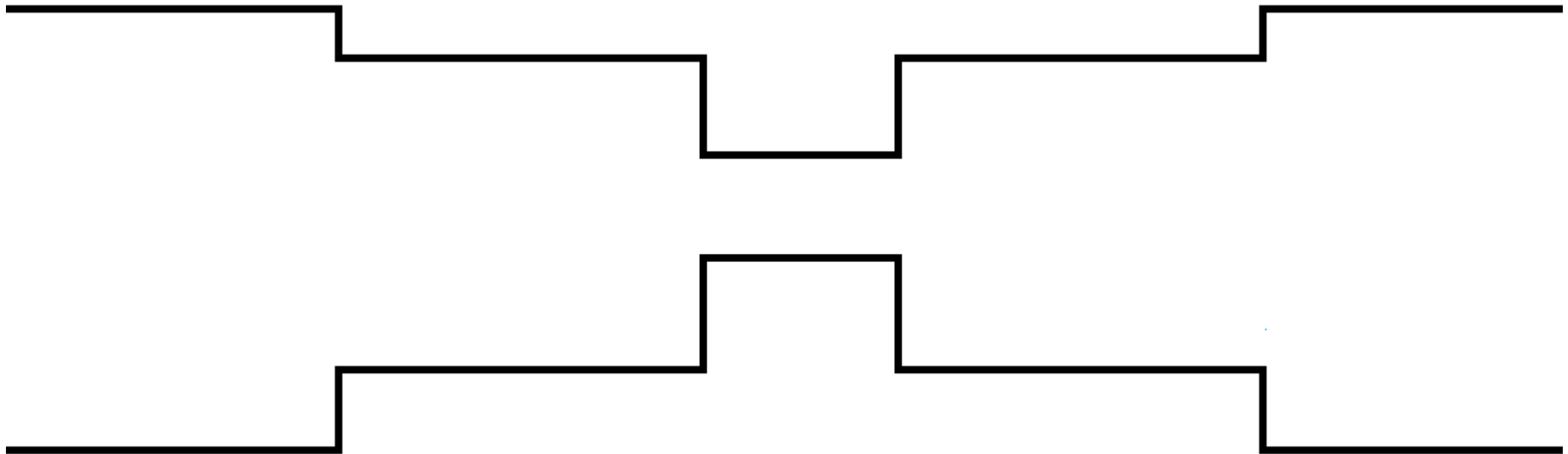
- TOC was founded in the 1980s by Eli Goldratt
 - Popularized in the best-selling novel “The Goal”
- TOC was originally focused on manufacturing plants
 - Heavily influenced by post-War Japanese Manufacturing
- TOC along with Lean heavily influenced early influencers in Agile
- TOC Influence on DevOps
 - The Phoenix Project was directly influenced by “The Goal”
 - Three Ways and The TOC Connection

What is the Theory of Constraints?

- The Goal of an Organization
 - According to Goldratt, the goal of any organization is to **increase net profit** while simultaneously **increasing return on investment** and **increasing cash flow**. These three measurements are key indicators of a company's financial health and success.
 - Goldratt describes **throughput** as the rate at which a system generates money through sales. Thus, to meet the financial goal, organizations should aim to **maximize throughput**.

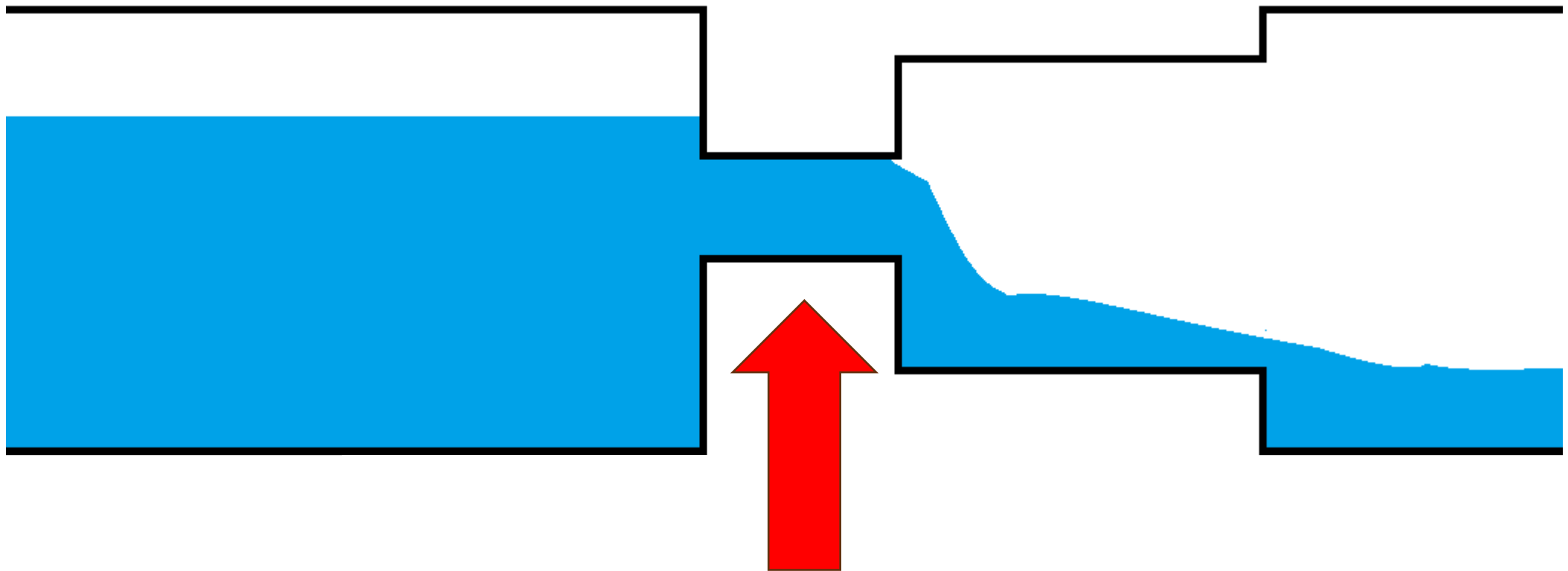
What is the Theory of Constraints

- Simple Premise:



What is the Theory of Constraints

- What happens if I increase the pipe width?



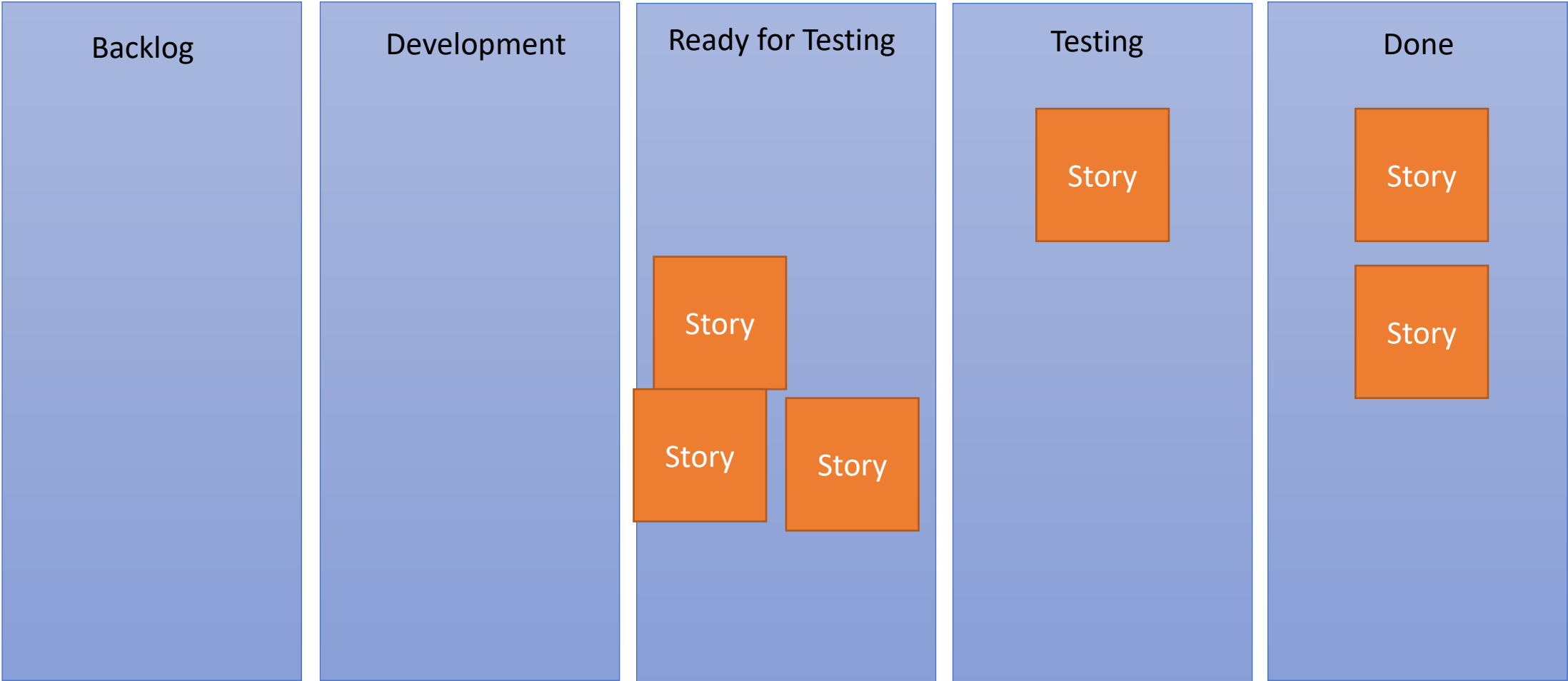
The Theory of Constraints and Throughput

Theory of Constraints (TOC): This management paradigm asserts that any manageable system is limited in achieving its goals by a small number of constraints, and that there is always at least one constraint.

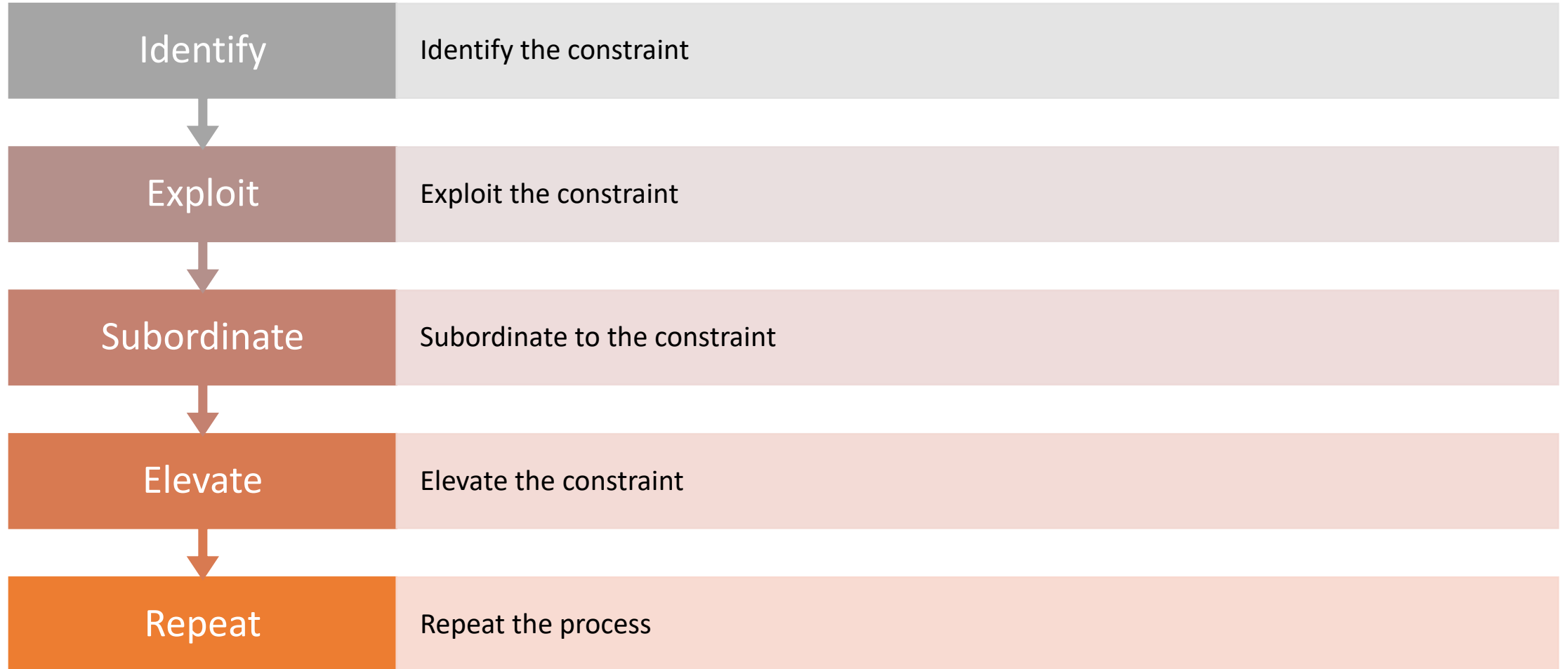
Constraint Dictating Throughput: The throughput of an organization, as per the TOC, is limited by one constraint, be it internal (e.g., production capacity, workforce skill) or external (e.g., market demand).

Interrelation: Therefore, to maximize throughput (and thereby achieve the goal), organizations need to identify and manage these constraints effectively. This involves using techniques such as The Five Focusing Steps

The Problem



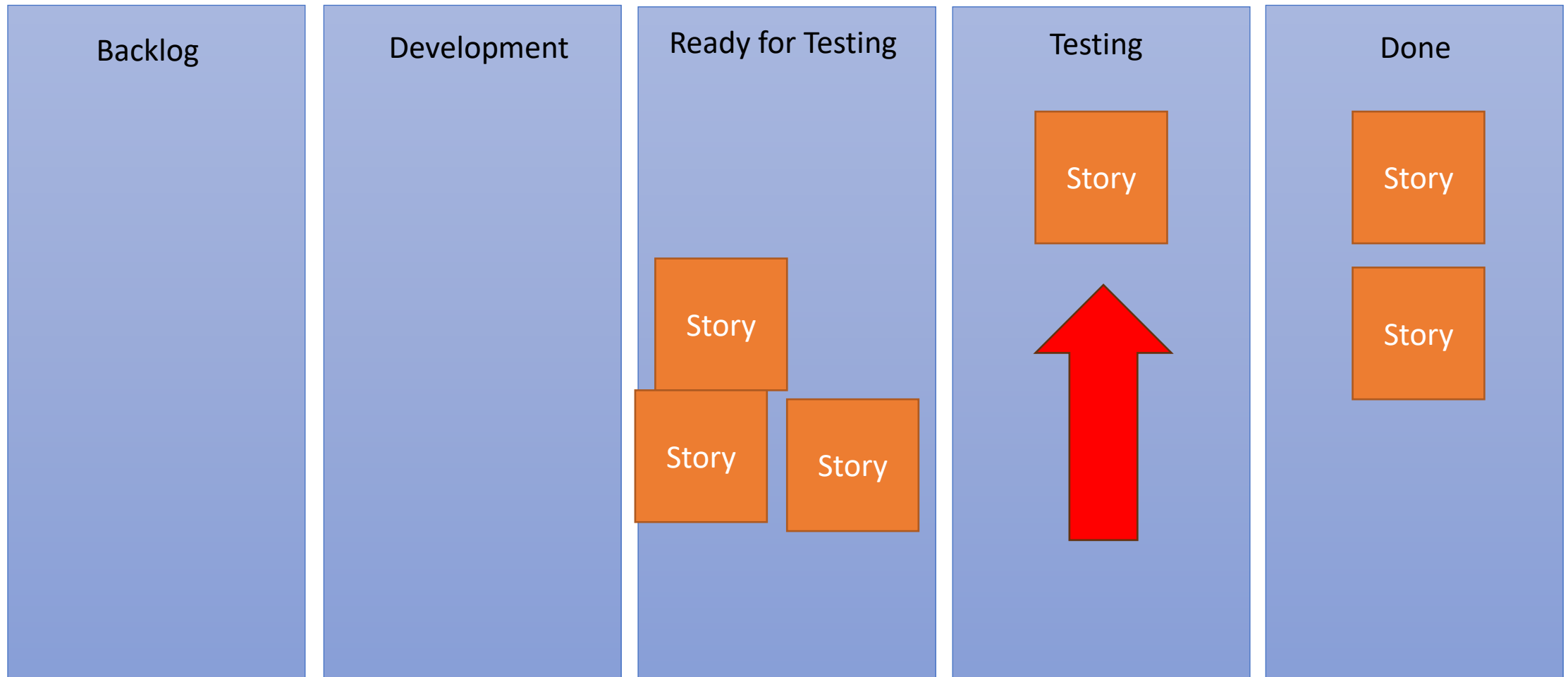
The Five Focusing Steps



Step 1: Identify the Constraint

- Definition: Identifying the bottleneck that hampers the achievement of more goals.
- Practices: Observing, visualizing, and analyzing workflow to find where bottlenecks occur.
- Implications: Allows for targeted improvements, increases overall understanding of the system.
- Results: More efficient resource allocation, clear goal for improvements.
- Agile Alignment: Visualize Work and Transparency

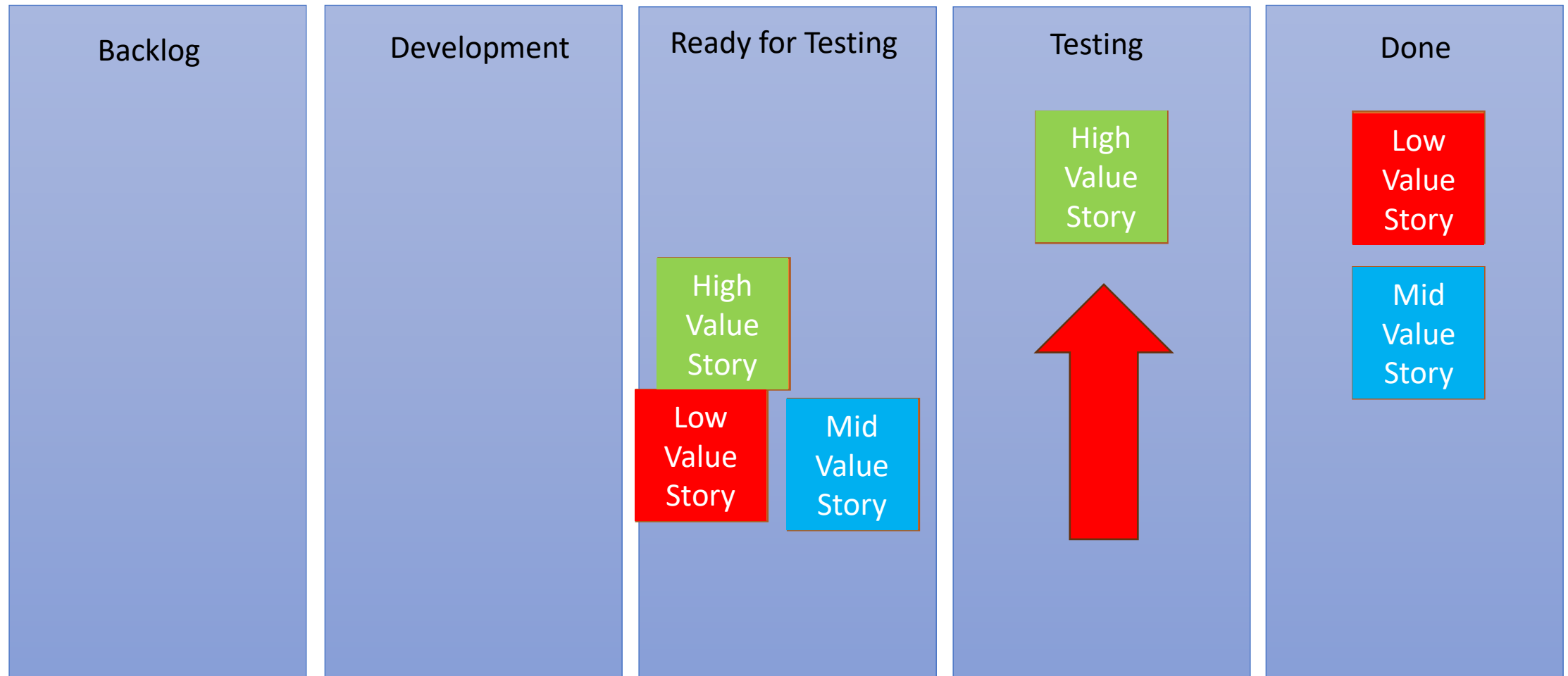
Identify the Constraint



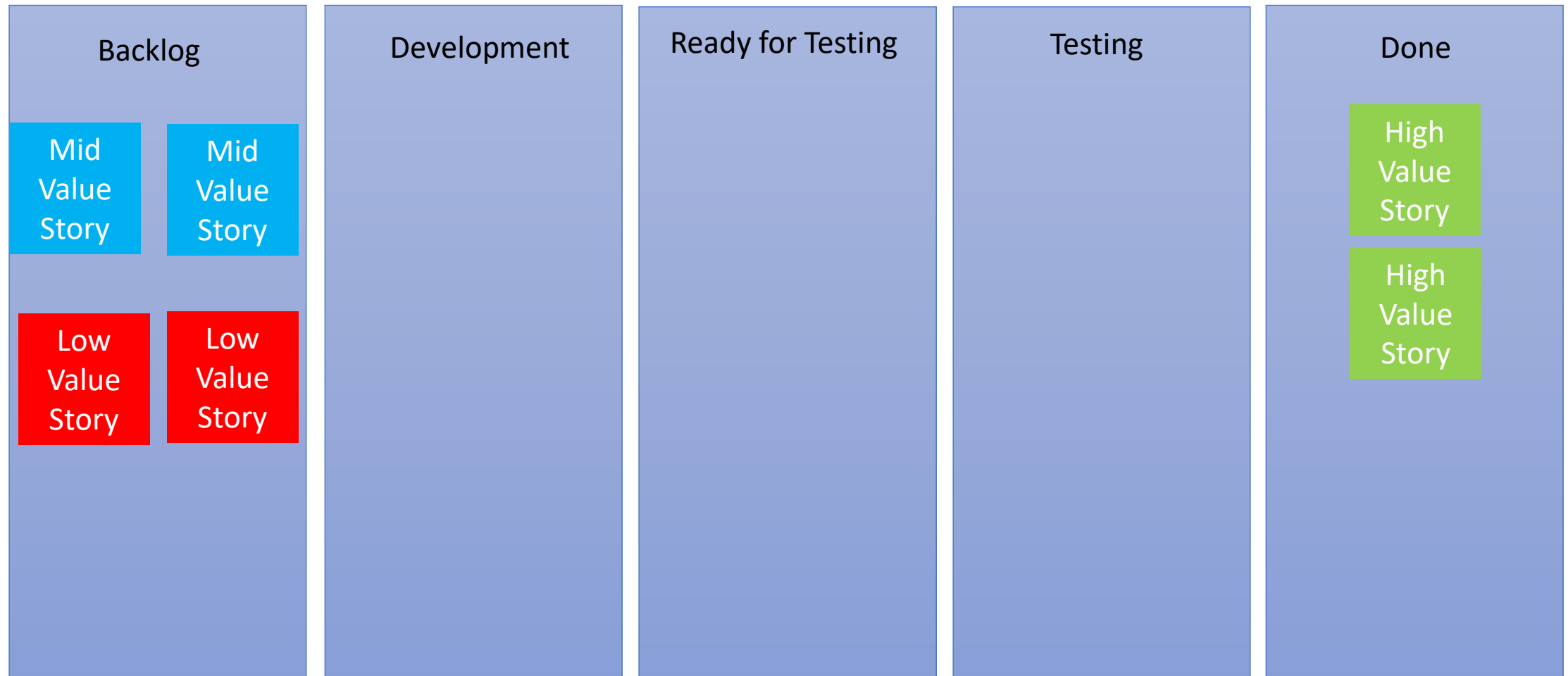
Step 2: Exploit the Constraint

- Definition: Maximizing the value throughput of the identified constraint without investing in major changes.
- Practices: Adjusting schedules, workflows or procedures to ensure maximum use of the constraint.
- Implications: Provides immediate benefits without high costs or drastic changes.
- Results: Increased throughput at the constraint, overall productivity increase.
- Agile Alignment: Similar to adjusting work priorities to maximize the value of work flowing through the constraint.

Exploit the Constraint



Exploit the Constraint



Step 3: Subordinate Everything to the Constraint

- Definition: Adjusting all non-constraints to support the throughput of the constraint.
- Practices: Changing workflow, priorities or procedures of non-constraints to support the constraint.
- Implications: Creates a cohesive, focused effort towards maximizing throughput.
- Results: Greater efficiency and effectiveness of the entire system.
- Agile Alignment: Seen in retrospectives where developers might start cross-training, pair programming or automating with the goal of supporting the constraint.

Subordinate Everything to the Constraint

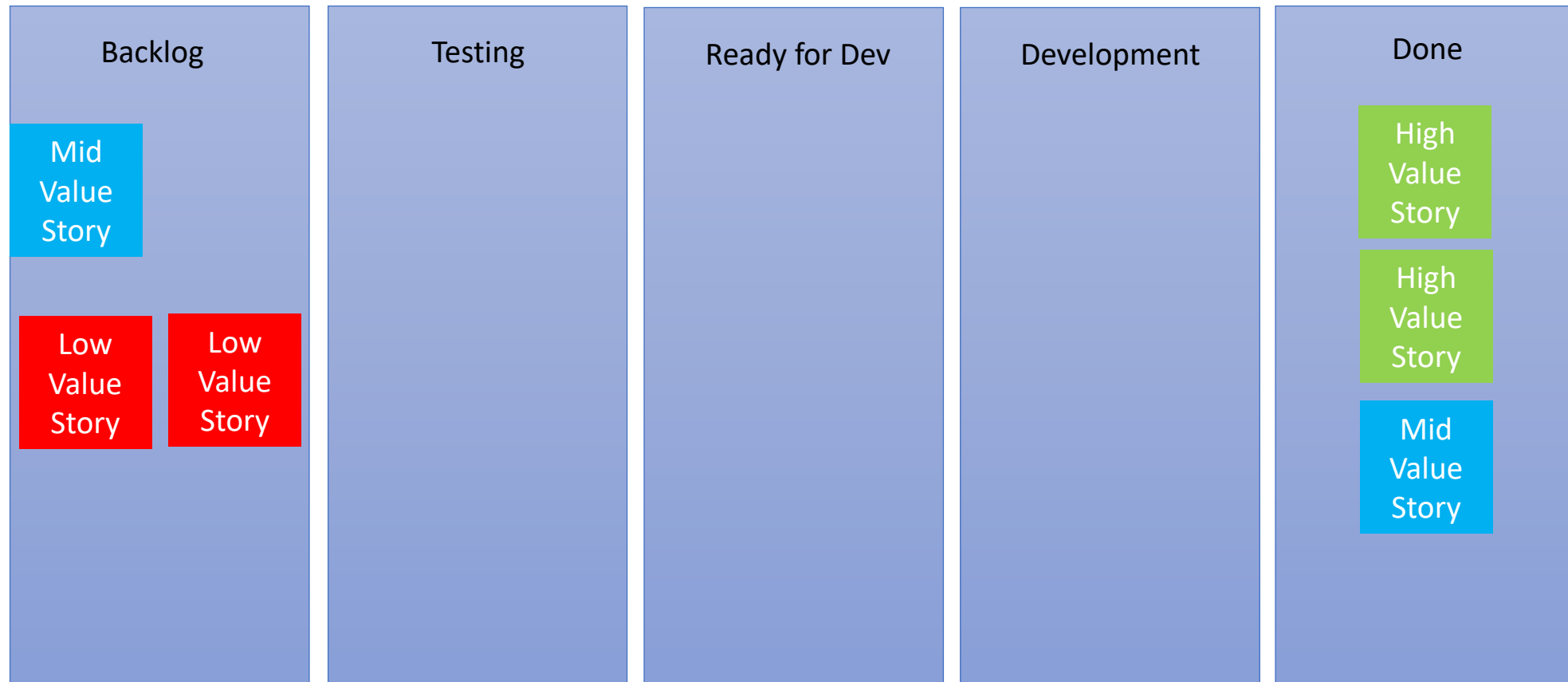




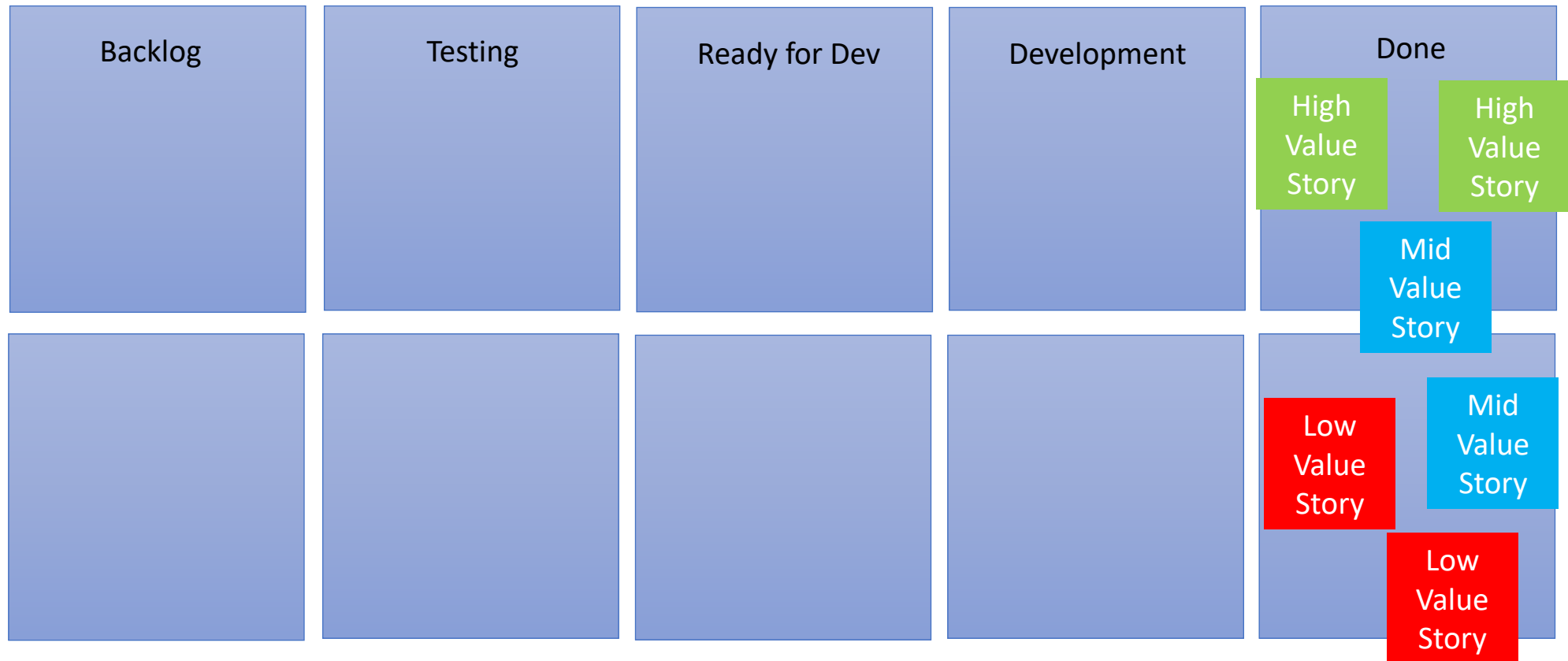
Step 4: Elevate the Constraint


- Definition: Increasing the capacity of the constraint through structural changes or investments.
- Practices: Investing in new tools, equipment or training, or changing the structure of the system.
- Implications: Allows for higher capacity and throughput but may require significant resources.
- Results: Breakthrough improvements in capacity and goal achievement.
- Agile Alignment: Scaling up the team or forming new teams with similar skills

Elevate the Constraint



Elevate the Constraint

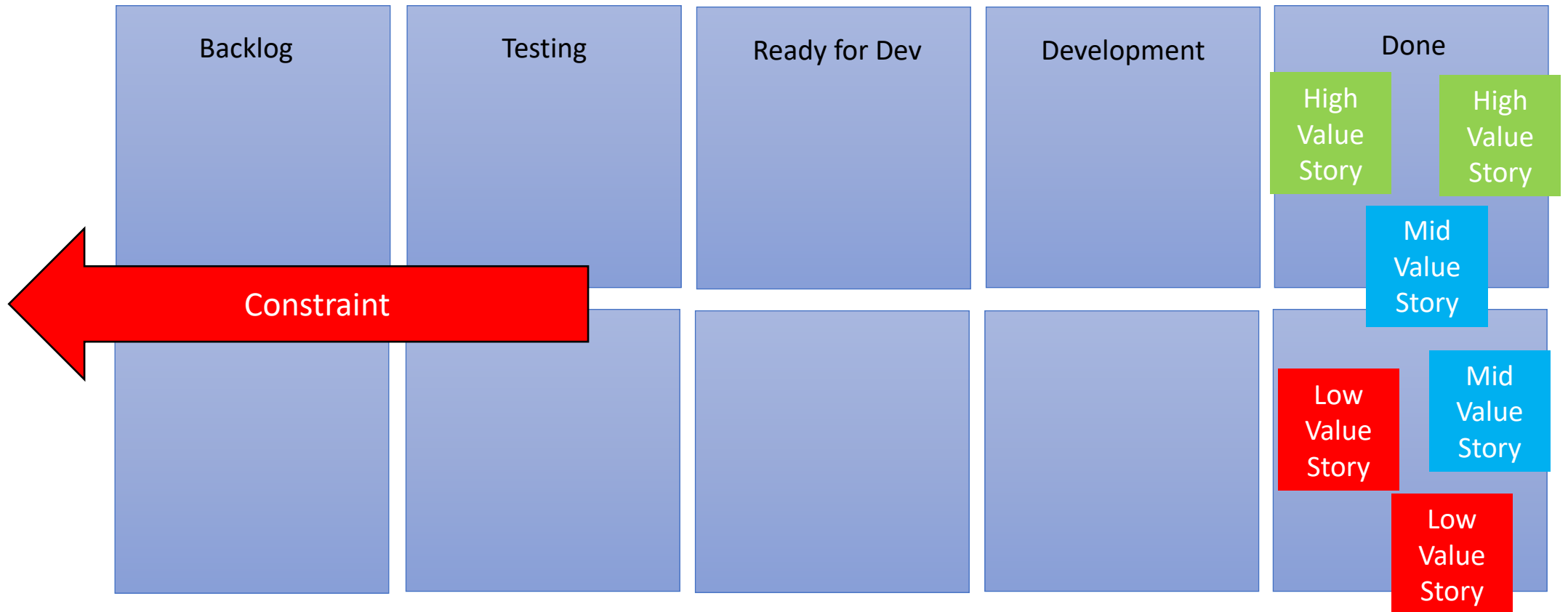




Step 5: Repeat

- Definition: If a constraint has been resolved, the process begins anew with the identification of the new constraint.
- Practices: Continual monitoring and analyzing the system to identify new constraints.
- Implications: Encourages continuous improvement and prevents complacency.
- Results: Sustained improvement in productivity and effectiveness.
- Agile Alignment: Echoes the Agile philosophy of iterative, continuous improvement.

Repeat





Benefits of Applying the Five Focusing Steps

- Improved Productivity
- Better Decision Making
- Reduced Lead Times
- Efficient Resource Utilization
- Cost Savings
- Increased Capacity
- Continues Improvement
- Improved Quality



Common Pitfalls and Misunderstandings

- **Misunderstanding the Concept of Constraints:** Attempting to tackle multiple constraints at once. In TOC, there's always one primary constraint that limits the system
- **Overemphasis on Elevating the Constraint:** Adding resources prematurely can lead to inefficiencies and wasted resources
- **Siloed Approaches:** Prioritizing individual department performance over the overall system can hamper productivity
- **Lack of Systems Thinking:** Not considering the organization as an interconnected system can lead to suboptimal performance
- **Insufficient Training:** Without a clear understanding of TOC principles and methods, implementation may fall short of its potential



ANNIE'S Bakery Practicing TOC

Scenario: Morning Prep at a Bakery

Annie's bakery is known for its freshly baked baguettes (\$1 each), almond croissants (\$3 each), and decadent chocolate cakes (\$5 each). The bakers arrive early to prepare these items for the day's sales. Prep starts at 2AM and everything sold that day must be ready at 8AM. Each item has to go through the following phases:

1. Mix Dough: The bakers can mix dough for 12 items per hour, regardless of the type of item.
2. Shape/Prepare: The dough for baguettes, which only needs shaping, can be prepared at a rate of 10 items per hour. The almond croissants, which require a more complicated folding process, and the chocolate cakes, which need shaping and filling preparation, can both be prepared at a rate of 6 items per hour.
3. Bake: The oven is the main constraint in the system, as it can bake up to 6 items per hour.
4. Cool: After baking, the items must cool. The bakery has enough cooling rack space for 12 items per hour.
5. Finish: Some items require a finishing touch, like glazing the almond croissants or icing the chocolate cakes. The bakery staff can finish up to 10 items per hour.

Scenario: Morning Prep at a Bakery

\$0

2:00 AM

Mix

(12)

Shape/Prep

Bake

Cool

Finish

Inventory

Baguette

Almond
Croissants

Chocolate
Cakes

Scenario: Morning Prep at a Bakery

\$0

3:00 AM

Mix

(10) (12) (2)

Shape/Prep

Bake

Cool

Finish

Inventory

Baguette

Almond
Croissants

Chocolate
Cakes

Scenario: Morning Prep at a Bakery

\$0

4:00 AM

Mix

(6 (12) 6)

Shape/Prep

(6) (4)

Bake

Cool

Finish

Inventory

(2)

Baguette

Almond
Croissants

Chocolate
Cakes

Scenario: Morning Prep at a Bakery

\$0

5:00 AM

Mix

(€ (12) 6)

Shape/Prep

(6)

Bake

(6)

Cool

Finish

Inventory

(2)

(6)

(4)

Baguette

Almond
Croissants

Chocolate
Cakes

Scenario: Morning Prep at a Bakery

\$6

6:00 AM

Mix

(6) (12) (6)

Shape/Prep

(6)

Bake

(6)

Cool

(6)

Finish

Inventory

(2)

(6)

(4)

(6)

Baguette

6\$

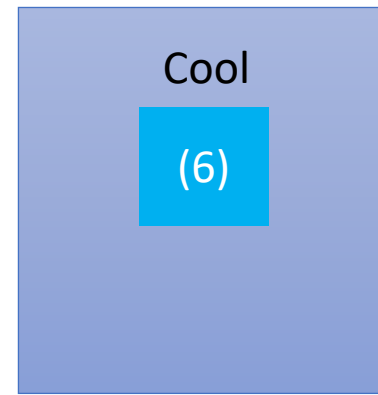
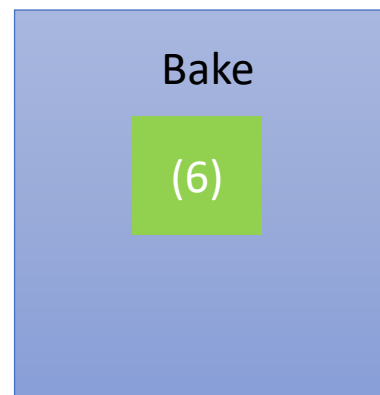
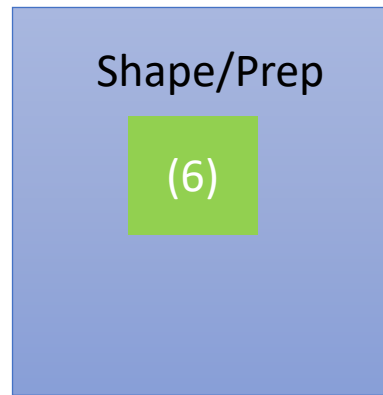
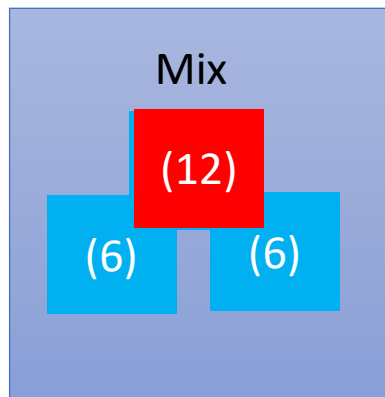
Almond
Croissants

Chocolate
Cakes

Scenario: Morning Prep at a Bakery

\$6

7:00 AM



Baguette

(6)

6\$

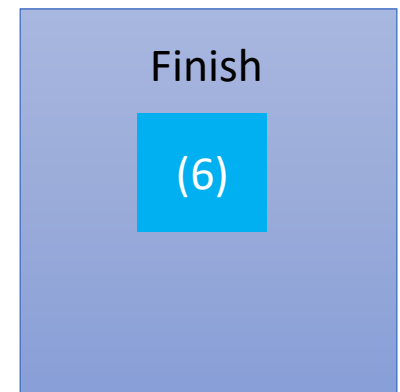
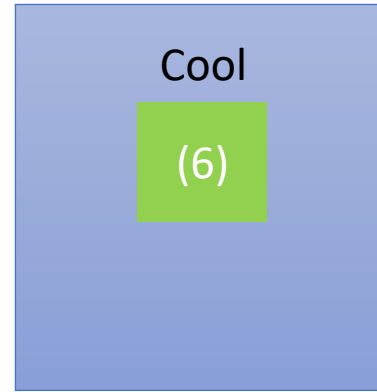
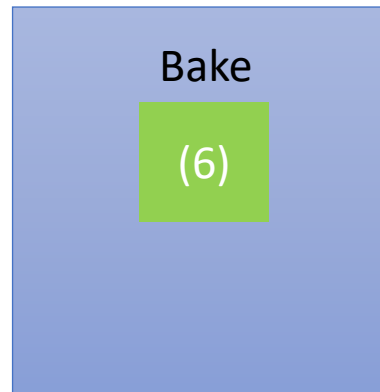
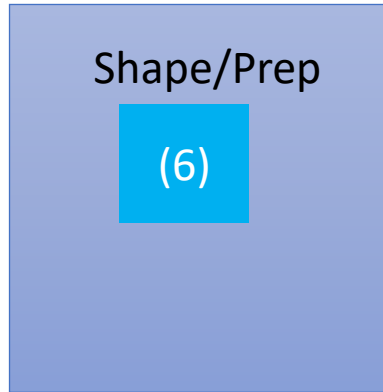
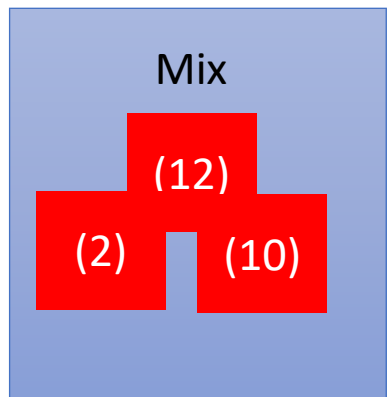
Almond
Croissants

Chocolate
Cakes

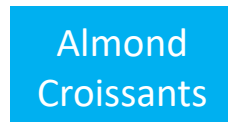
Scenario: Morning Prep at a Bakery

\$24

8:00 AM



6\$

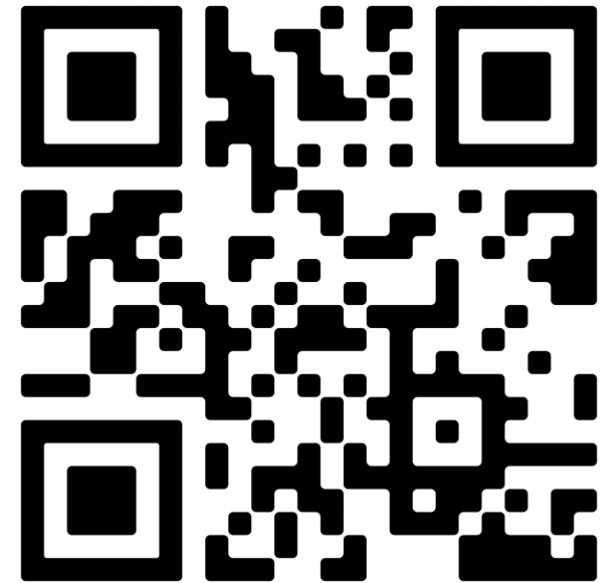


18\$



How do we improve this small business?

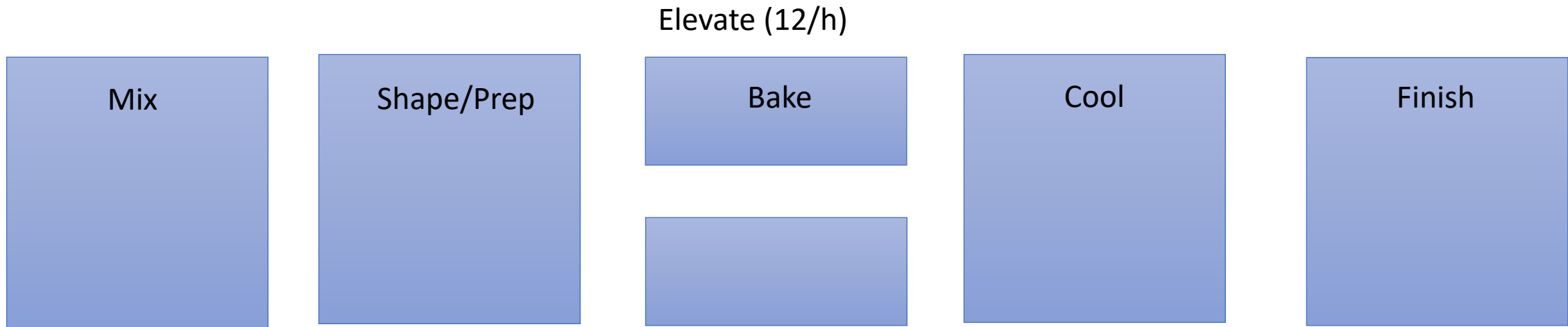
- Where is the constraint?
- How do we exploit the constraint?
- What do we subordinate to the constraint?
- How might we elevate the constraint?
- Before repeating, what is the maximum throughput you could achieve?
- Where do we look to repeat?



<https://forms.gle/gL7t7cXmF4LYPrXM6>

Scenario: Ideal (pre-Repeat)

\$0 1:59 AM



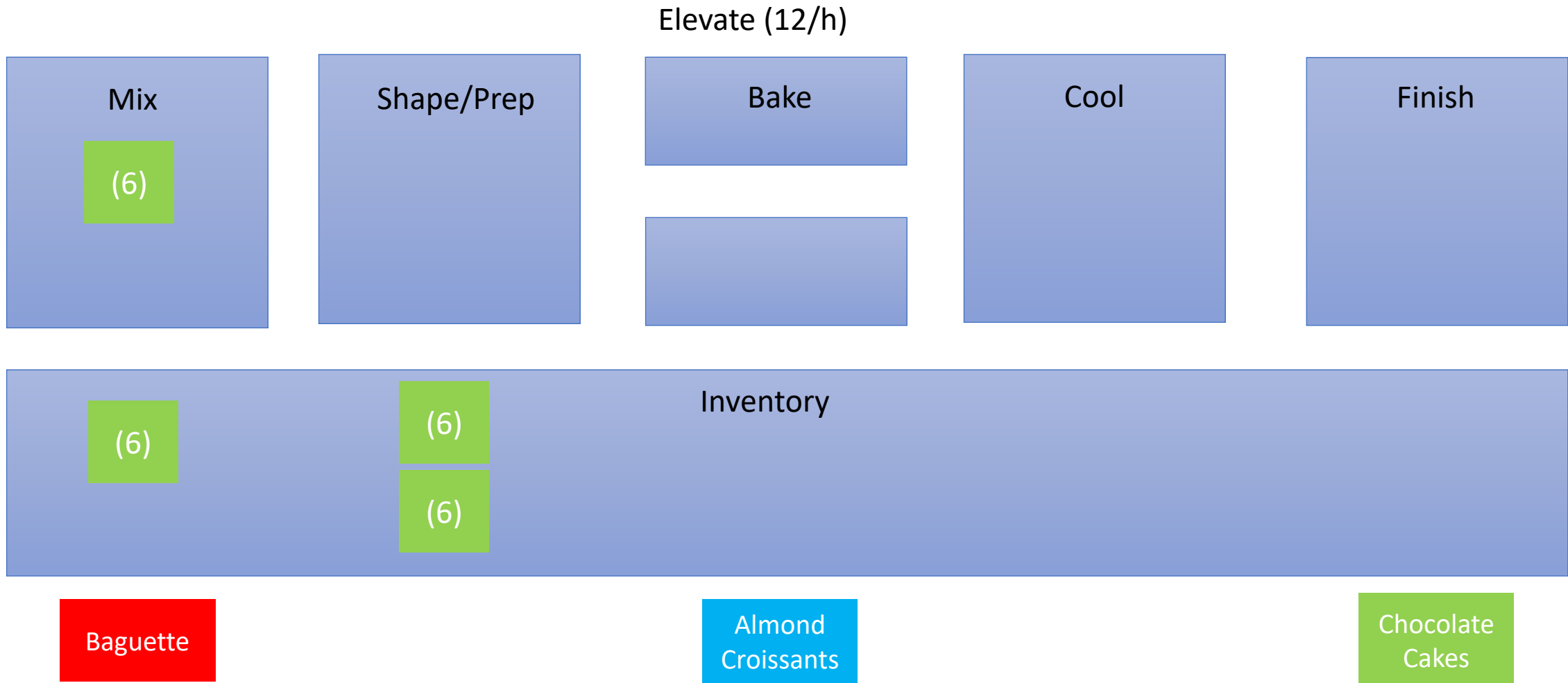
Baguette

Almond Croissants

Chocolate Cakes

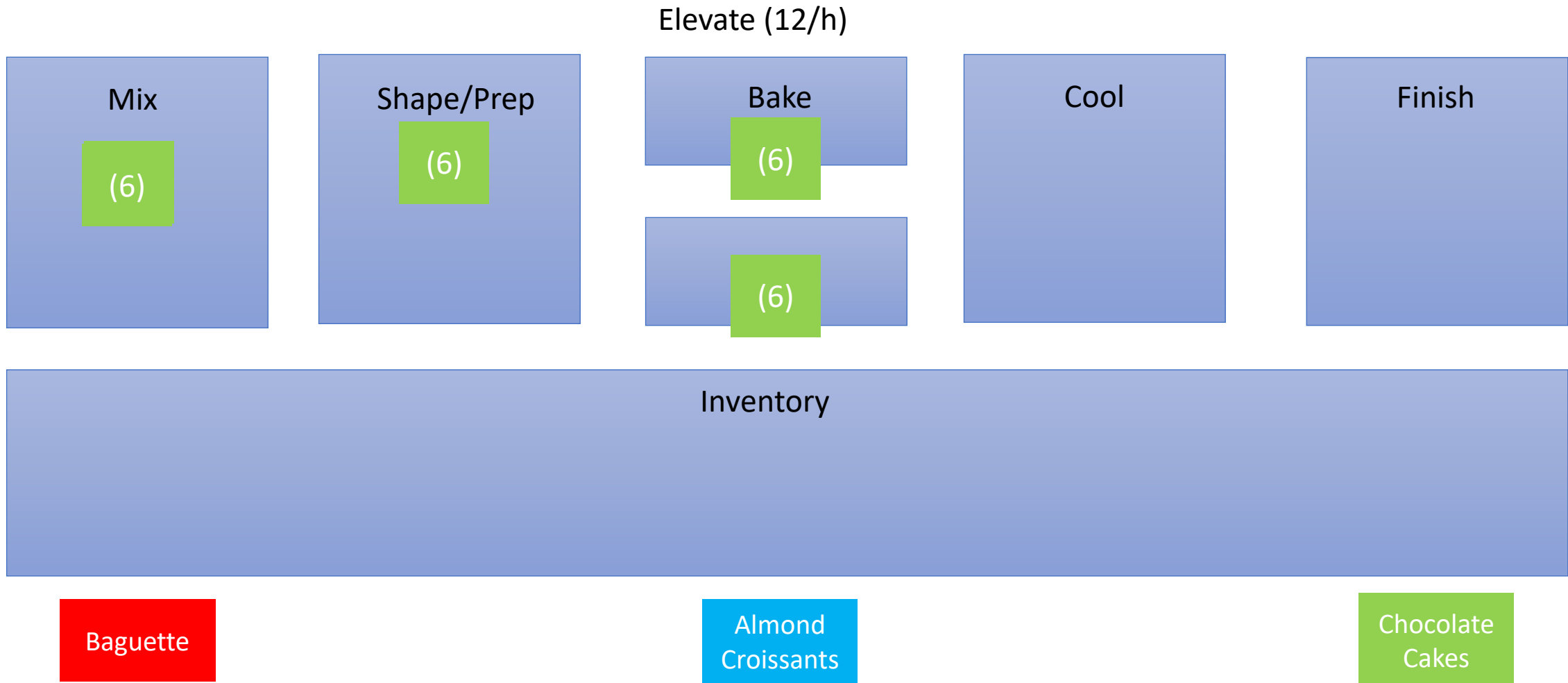
Scenario: Ideal (pre-Repeat)

\$0 2:00 AM



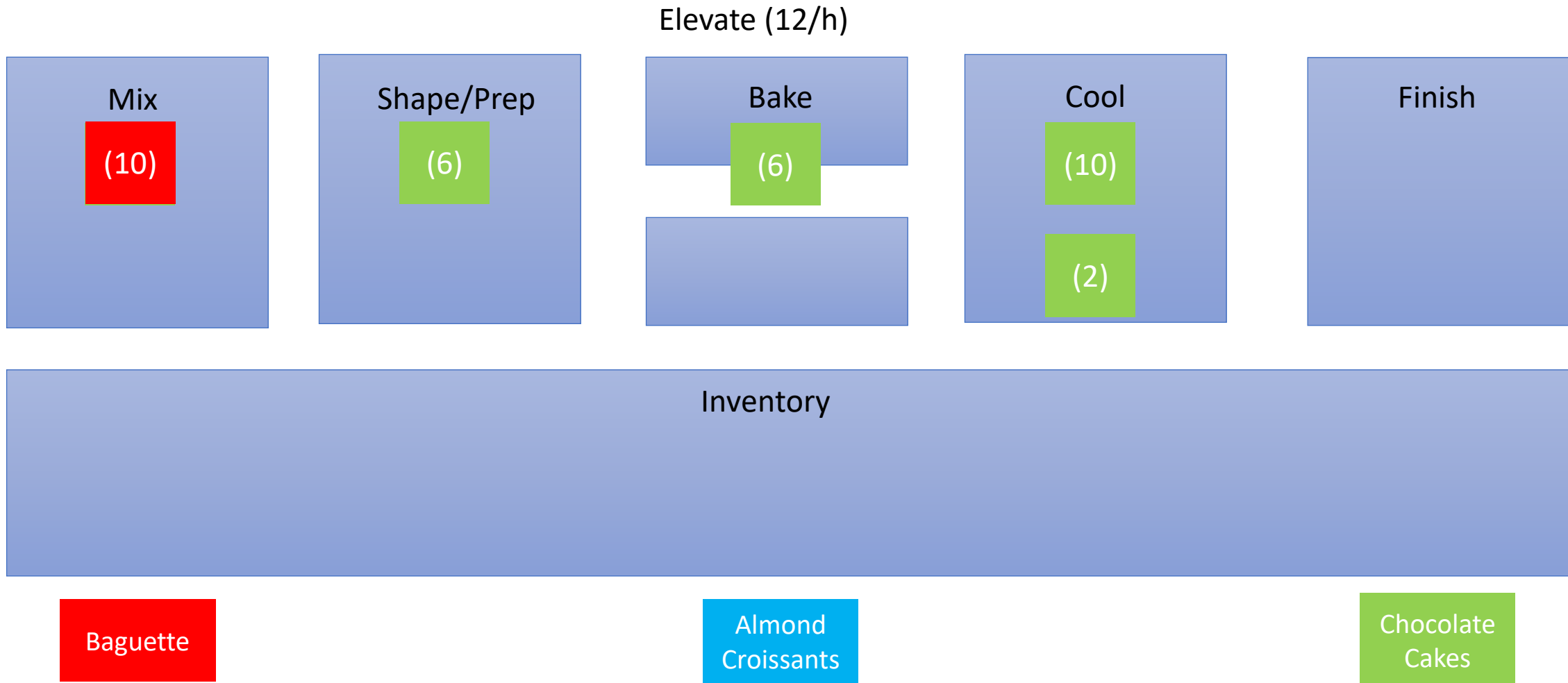
Scenario: Ideal (pre-Repeat)

\$0 3:00 AM



Scenario: Ideal (pre-Repeat)

\$0 4:00 AM



Scenario: Ideal (pre-Repeat)

\$50 5:00 AM



Baguette

Almond Croissants

Chocolate Cakes

50\$

Scenario: Ideal (pre-Repeat)

\$90 6:00 AM



Baguette

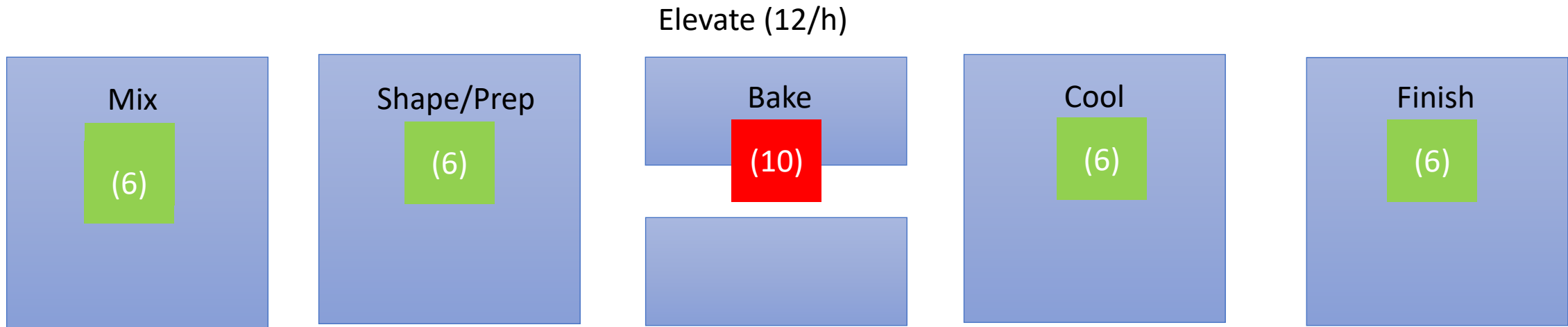
Almond
Croissants

Chocolate
Cakes (18)

90\$

Scenario: Ideal (pre-Repeat)

\$120 7:00 AM



Baguette

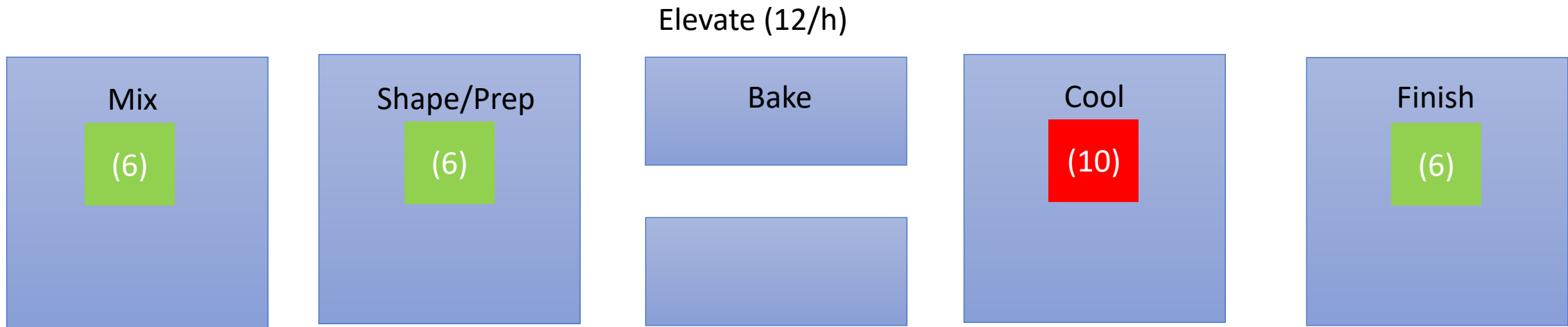
Almond Croissants

Chocolate Cakes (24)

\$\$\$

Scenario: Ideal (pre-Repeat)

\$160 8:00 AM



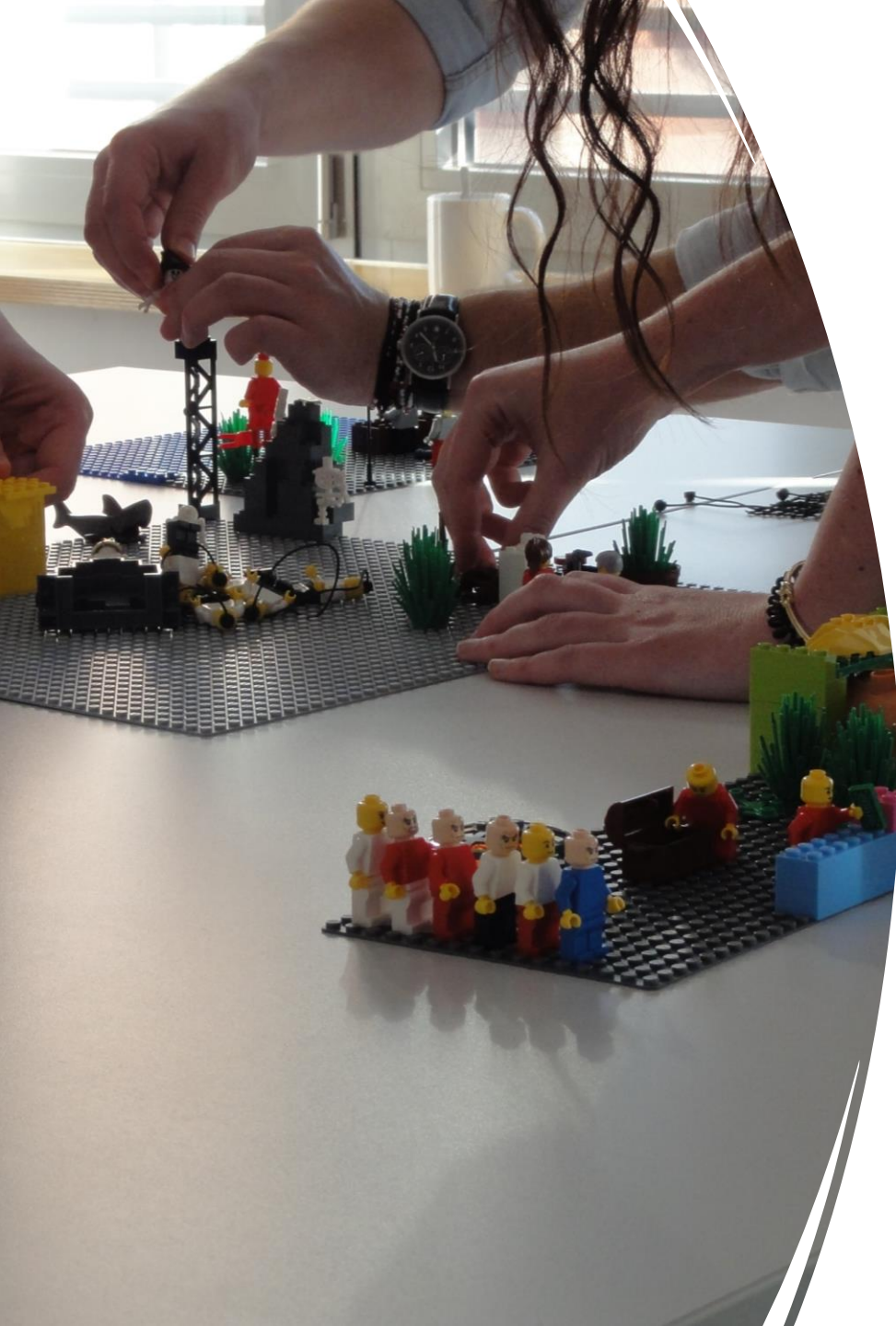
Baguette

10\$

Almond
Croissants

Chocolate
Cakes (24)

150\$



Join me for Lego Serious Play Retro

- **Invitation:** Seeking 5 enthusiastic participants for a Lego Serious Play Retrospective!
- **Venue:** Not Your Average Joe's.
- **Offer:** A round of drinks and appetizers on us!
- **What to Expect:**
 1. **Engage Creatively:** Use Lego bricks to reflect and share your thoughts.
 2. **Narrative Play:** Tell the story of your Lego creation, representing your experience.
 3. **Open Feedback:** Share the best and worst moments in a supportive, fun environment.
 4. **Connect & Bond:** Engage with peers over delicious appetizers and drinks.