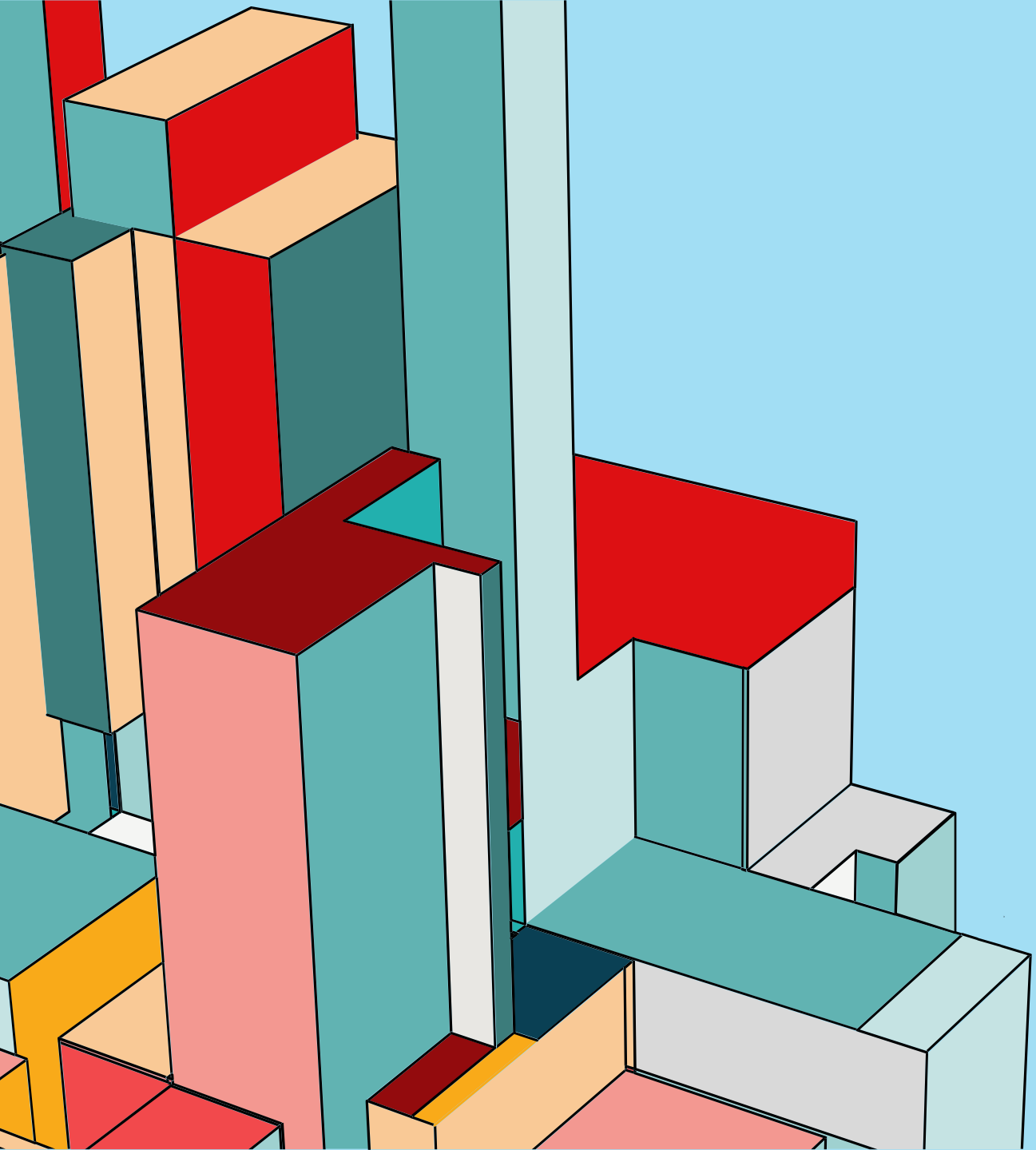


THE TECHNOLOGY VALUE STREAM

CSD 380 – DevOps
Angela Vargas
1.2 Assignment

WHAT IS TECHNOLOGY VALUE STREAM?

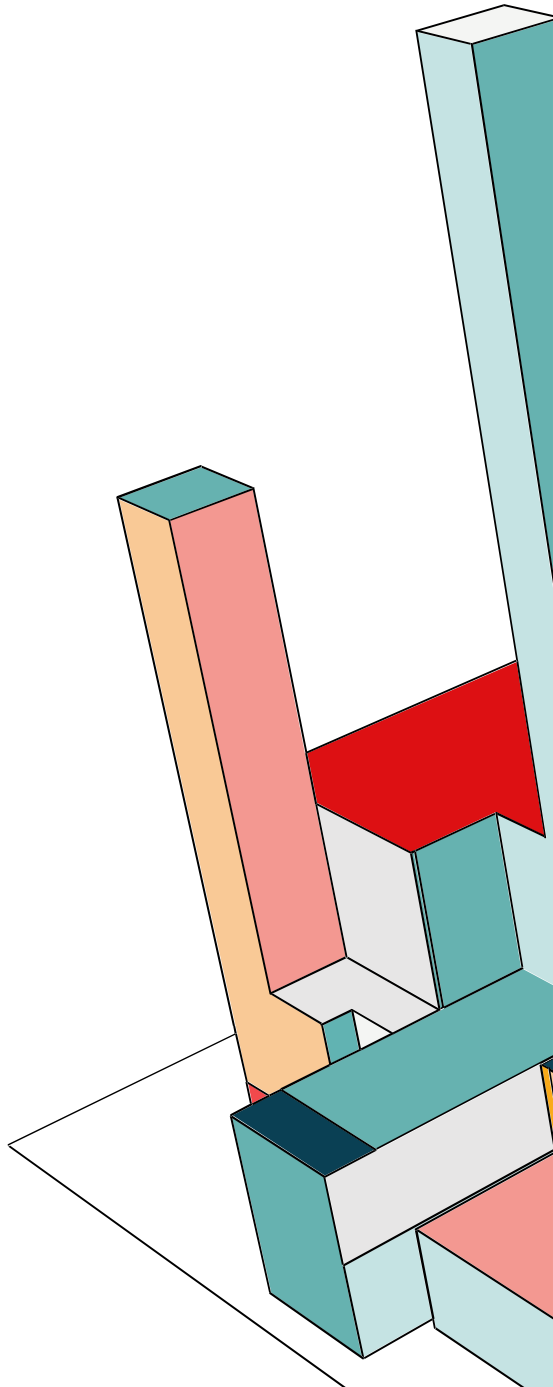
•The **technology value stream** represents all the steps required to turn an idea or request into a working technology service.

•It includes every phase such as:

- •Planning and requirements
- •Software development
- •Testing and quality assurance
- •Deployment to production
- •Ongoing operations and support

•Value is only delivered when the service is **running successfully for the customer**.

•DevOps focuses on improving how workflows across this entire stream, not just one team or step.



LEAD TIME VS. PROCESSING TIME

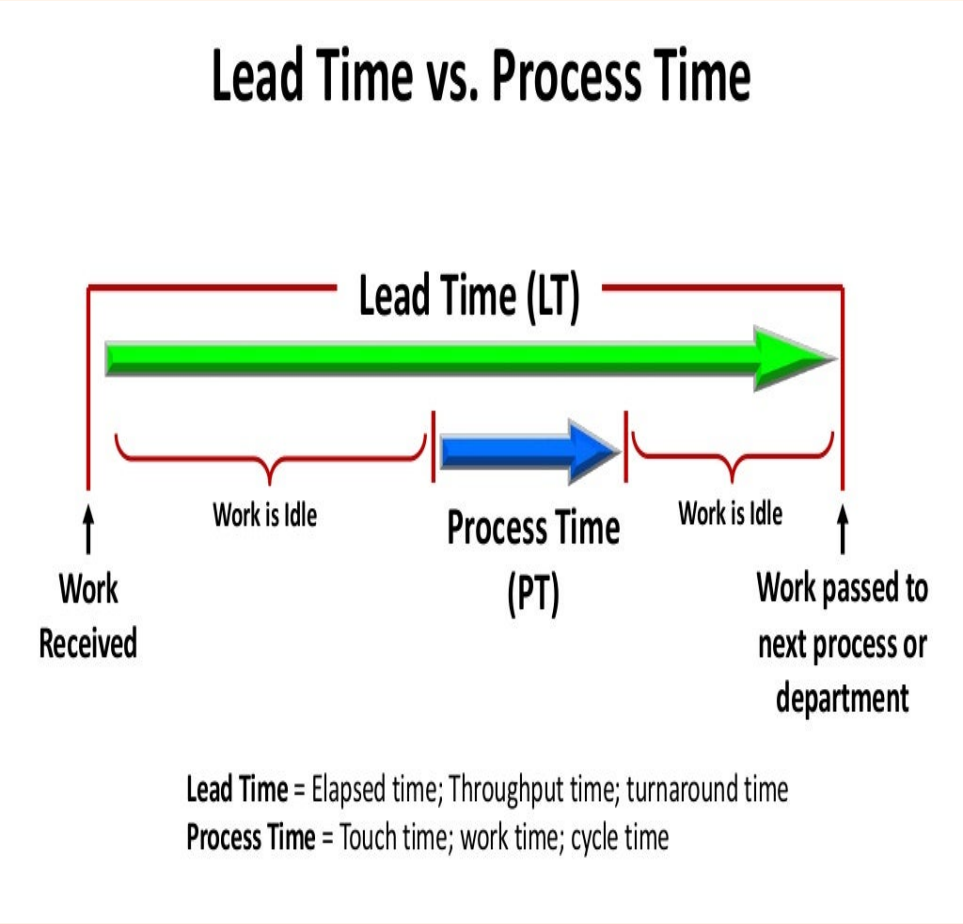
Lead Time
The total amount of time from when work is requested until it is delivered to the customer.

Includes:

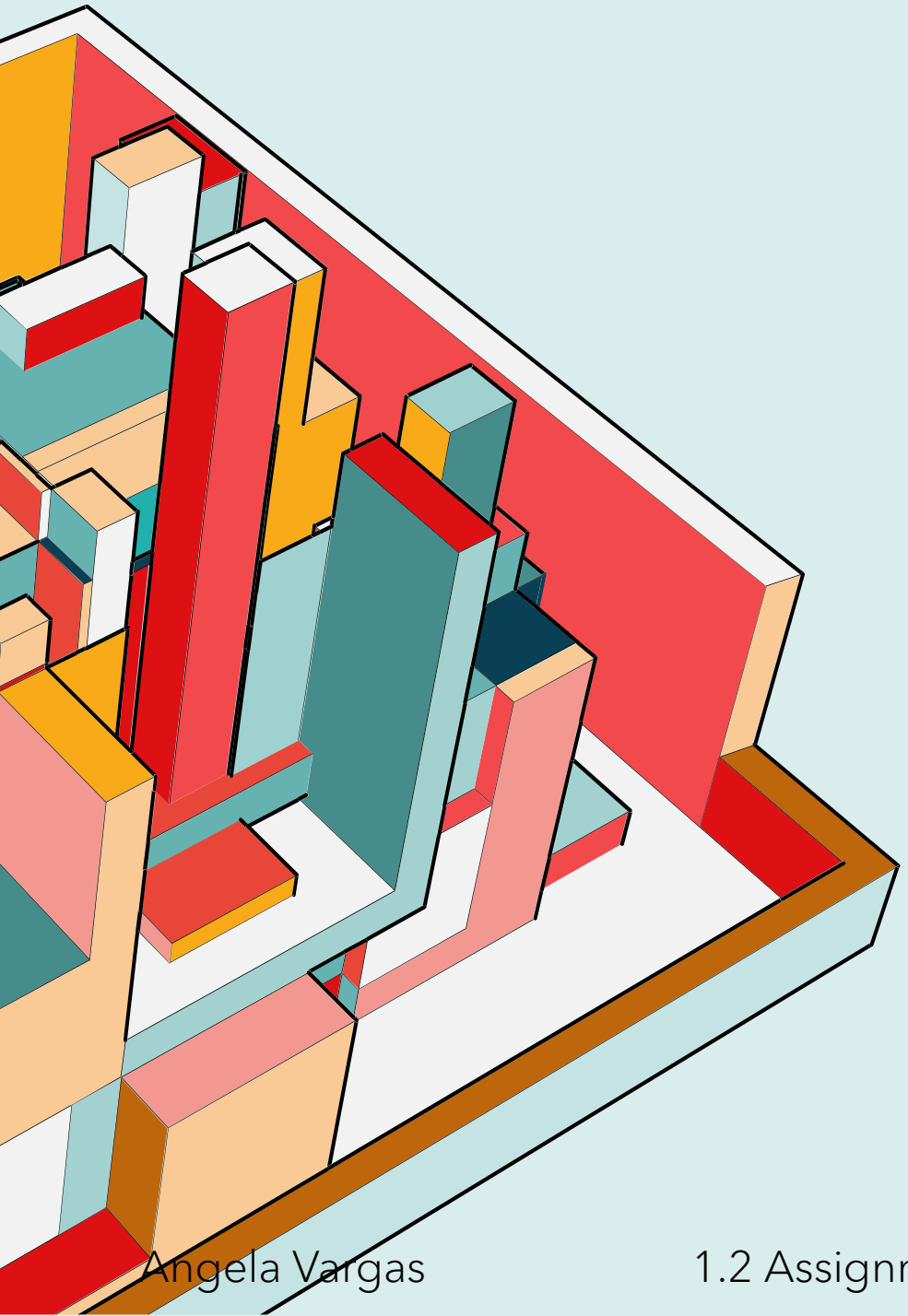
- Waiting in queues
- Approval delays
- Handoffs between teams
- Rework and corrections

Processing Time
The time spent actively working on the task.
Usually much shorter than lead time.

Key Point:
Most inefficiency in technology delivery comes from waiting, not from doing the actual work



1.1 Image: Lean Leadership



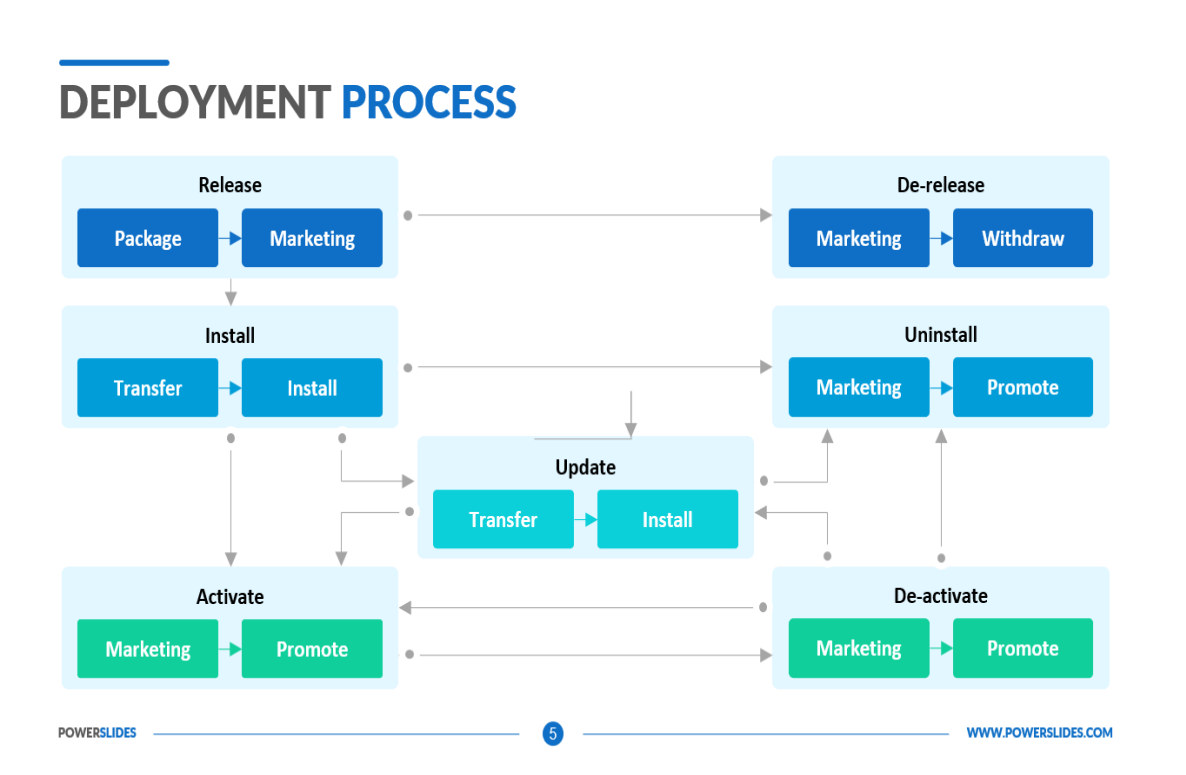
WHY LONG LEAD TIMES ARE A PROBLEM

•Long lead times delay the delivery of value to customers.

•Bugs and defects are discovered long after the code was written, making them harder to fix.

•Teams lose visibility into where work is getting stuck.

•Long delays increase:
- •Stress on teams
- •Cost of rework
- •Organizations struggle to respond quickly to market or customer needs when lead times are long.



1.2 Image: Deployment Process Flow

COMMON SCENARIO: DEPLOYMENTS TAKING MONTHS

•Many traditional organizations require **weeks or months** to deploy software changes.

•Common causes include:
- •Manual testing and deployments
- •Separate development and operations teams
- •Large batch releases
- •Excessive approvals and change boards

•These delays create bottlenecks in the value stream.

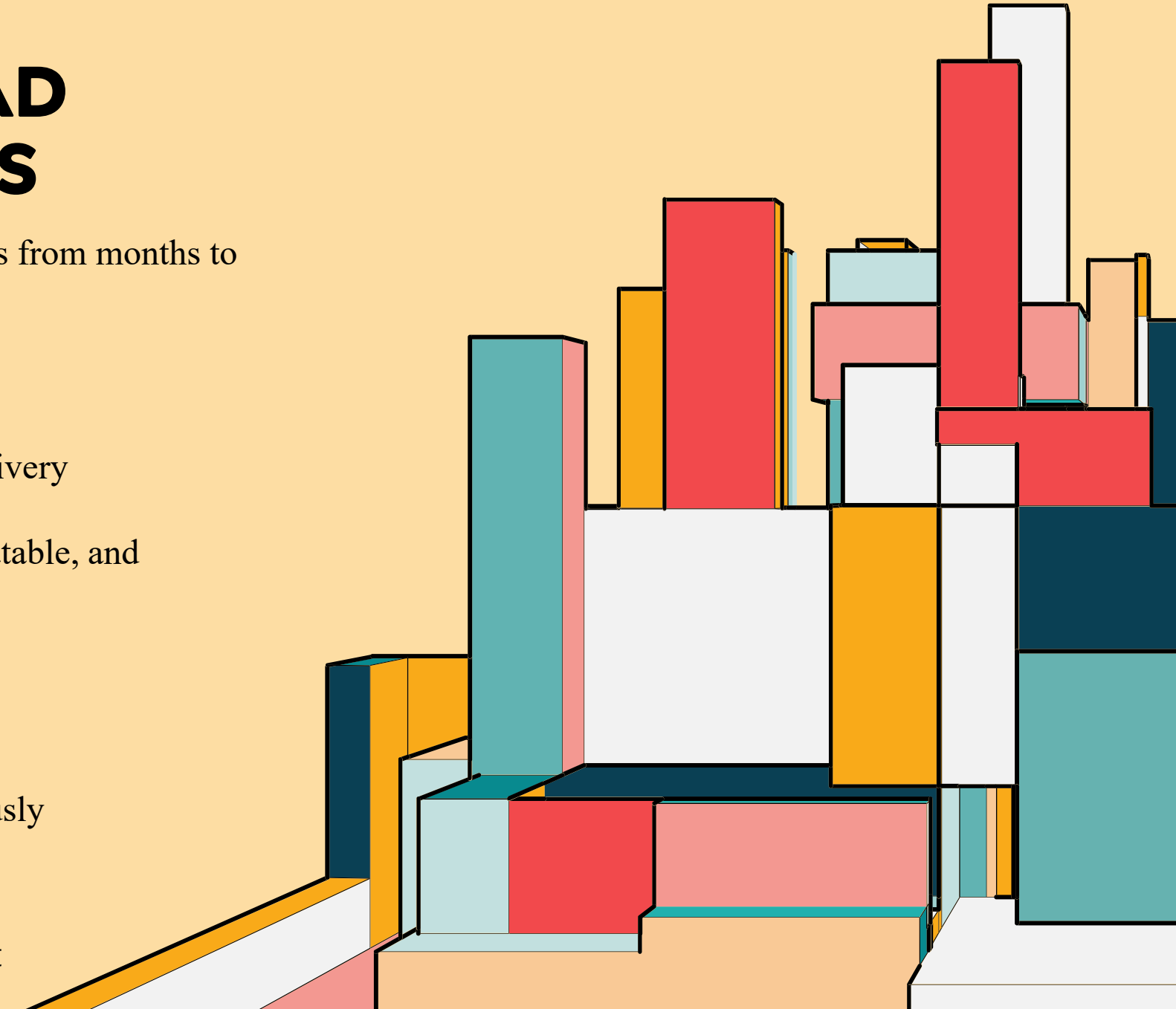
•The longer changes sit unfinished, the higher the chance of failure during deployment

DEVOPS IDEAL: DEPLOYMENT LEAD TIMES OF MINUTES

•DevOps aims to reduce deployment lead times from months to **minutes**.

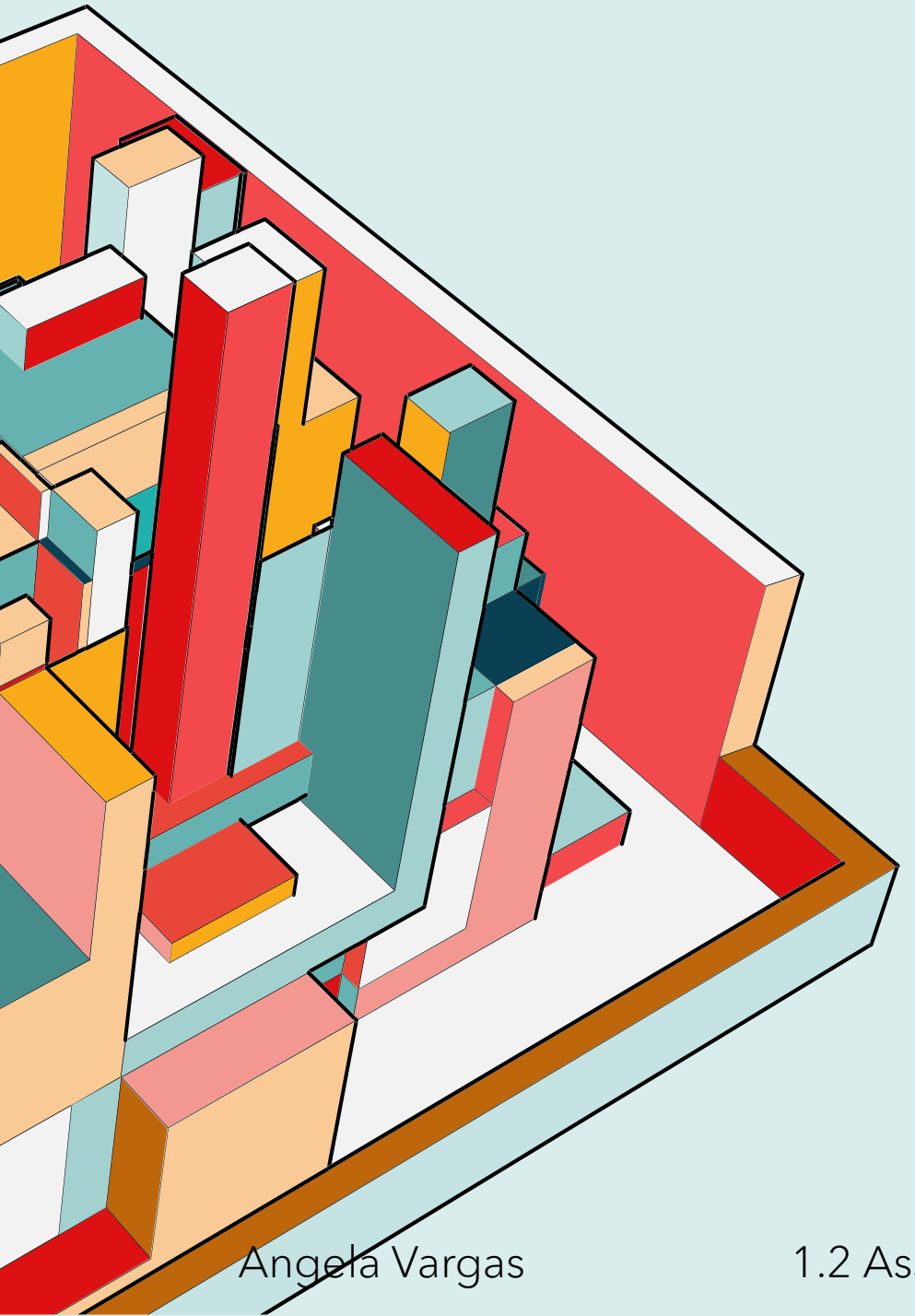
•This is achieved by:
- •Automating testing and deployments
- •Using continuous integration and delivery
- •Making small, frequent changes
- •Deployments become low-risk, repeatable, and routine.

•Faster deployments allow teams to:
- •Receive quick feedback
- •Fix issues faster
- •Deliver value to customers continuously



GRAPHIC SLIDE: TECHNOLOGY VALUE STREAM

- The graphic shows how workflows from an **idea** to the **customer**.
- Each box represents a stage where work is actively done (**processing time**).
- The space between stages represents **waiting time**, which adds to **lead time**.
- Delays often occur due to approvals, handoffs, or queues.
- DevOps improves this flow by reducing waiting, automating steps, and improving team collaboration.
- **Key Takeaway:**
  Most delays happen between steps, not during the work itself. Improving flow reduces lead time and risk.



WHY REDUCING LEAD TIME MATTERS

•Faster lead times allow organizations to deliver value sooner.

•Reduces risk by avoiding large, complex releases.

•Enables faster learning through continuous feedback.

•Improves software quality and system reliability.

•Creates a healthier work environment with less pressure and burnout.

•DevOps improves outcomes by **removing waste**, not by pushing teams to work harder.

CONCLUSION

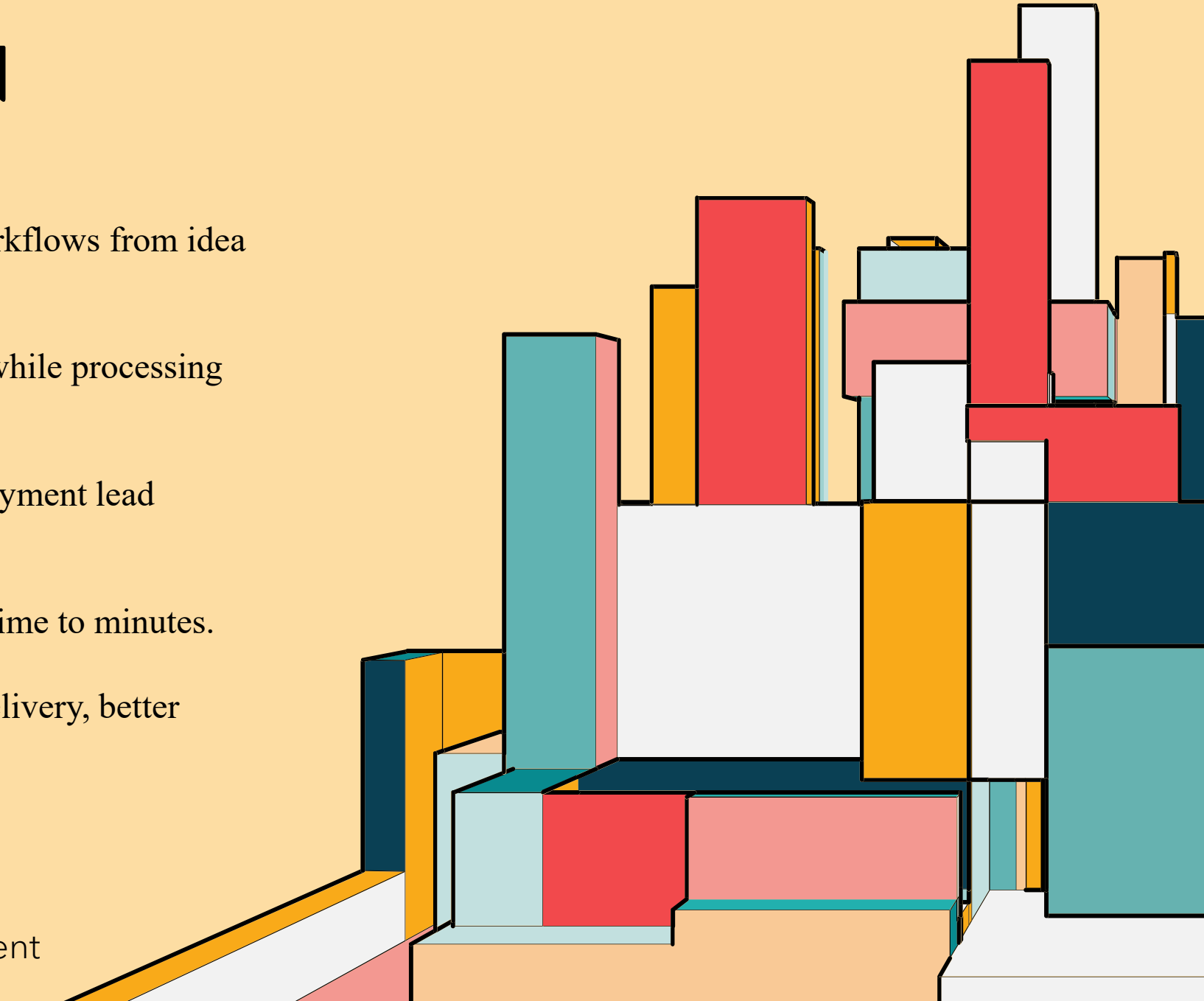
•The technology value stream shows how workflows from idea to customer.

•Lead time measures the total delivery time, while processing time measures actual work.

•Many organizations struggle with long deployment lead times.

•DevOps provides practices that reduce lead time to minutes.

•Improving the value stream leads to faster delivery, better quality, and stronger business results.



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