ATDD

What are we Going to Talk About

- Something Something Driven Development
- Evolution of a Process
- To ATDD or not to ATDD, Is That a Question?

Acronym Confusion

BDD

- Behavior Driven Development
- Business Driven Development

Acronym Confusion

ATDD

- Acceptance Test Driven Development
- Automated Test Driven Development

AATDD?

- Automated Acceptance Test Driven Development

Over the Wall

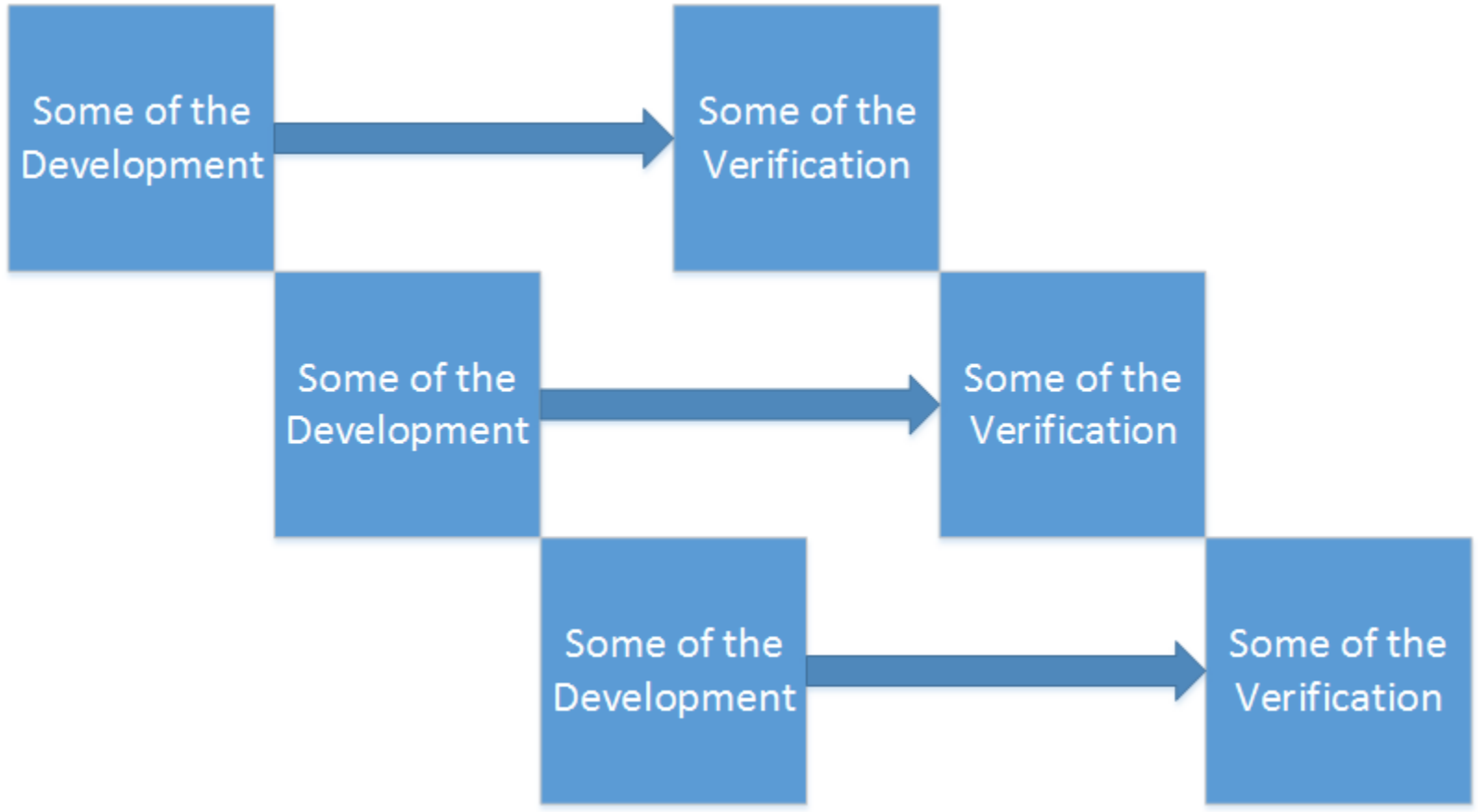
What happens if your mom asks you to clean the house while she's at the store?

You get grounded!

Over the Wall

- At least we're testing, right?
- No chance to learn.
- When will we be done testing?
  - When we hit the release date.

SCRUMFall


Some of the Development
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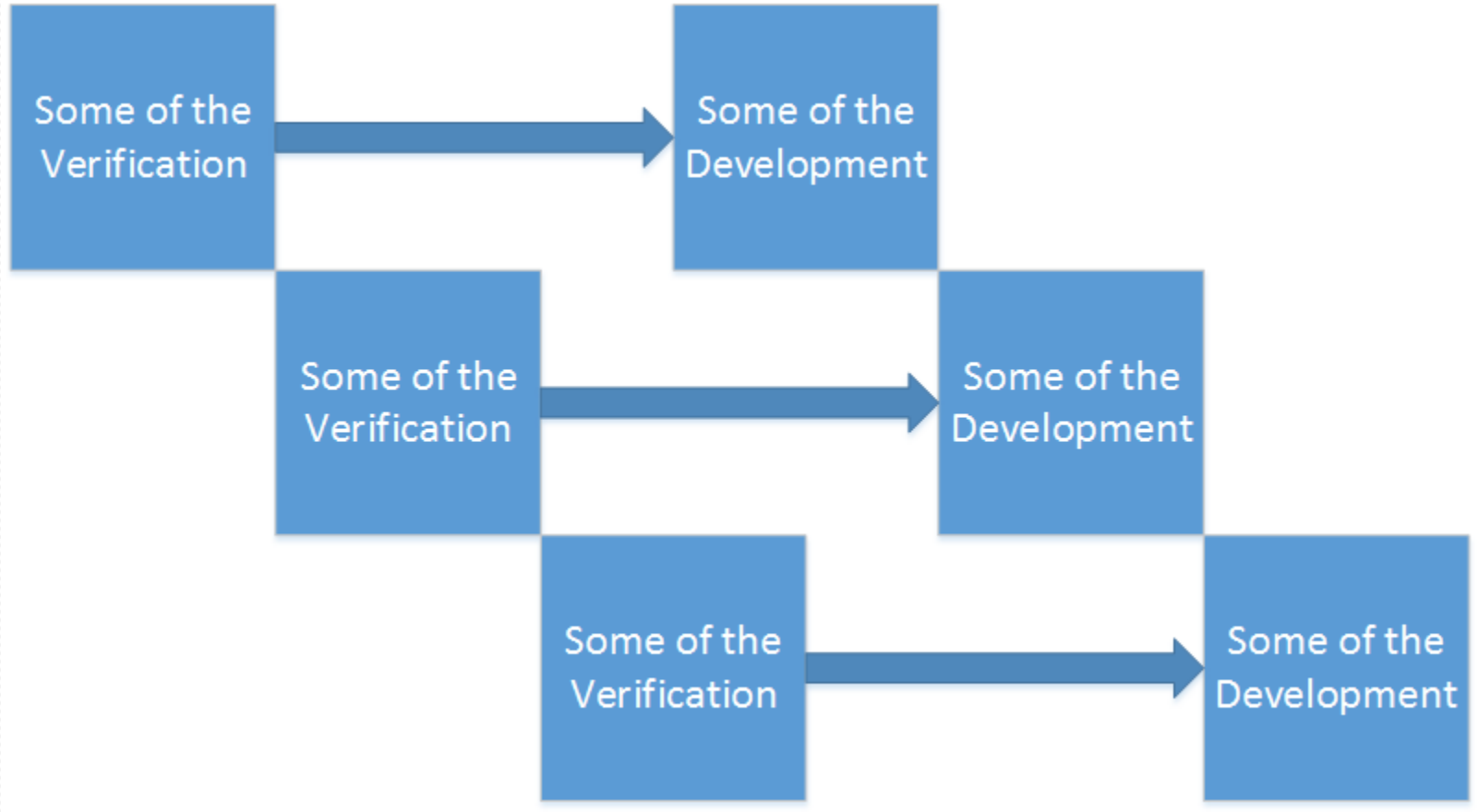
SCRUMFall

- Opportunity to integrate feedback and improve
- Might still spend time building something we don't understand

- You're getting feedback after you clean each room.

ATDD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ATDD

Mom: Son, can you clean the house while I'm at the store, please?

You: Sure, Mom. What cleaning will you find acceptable?

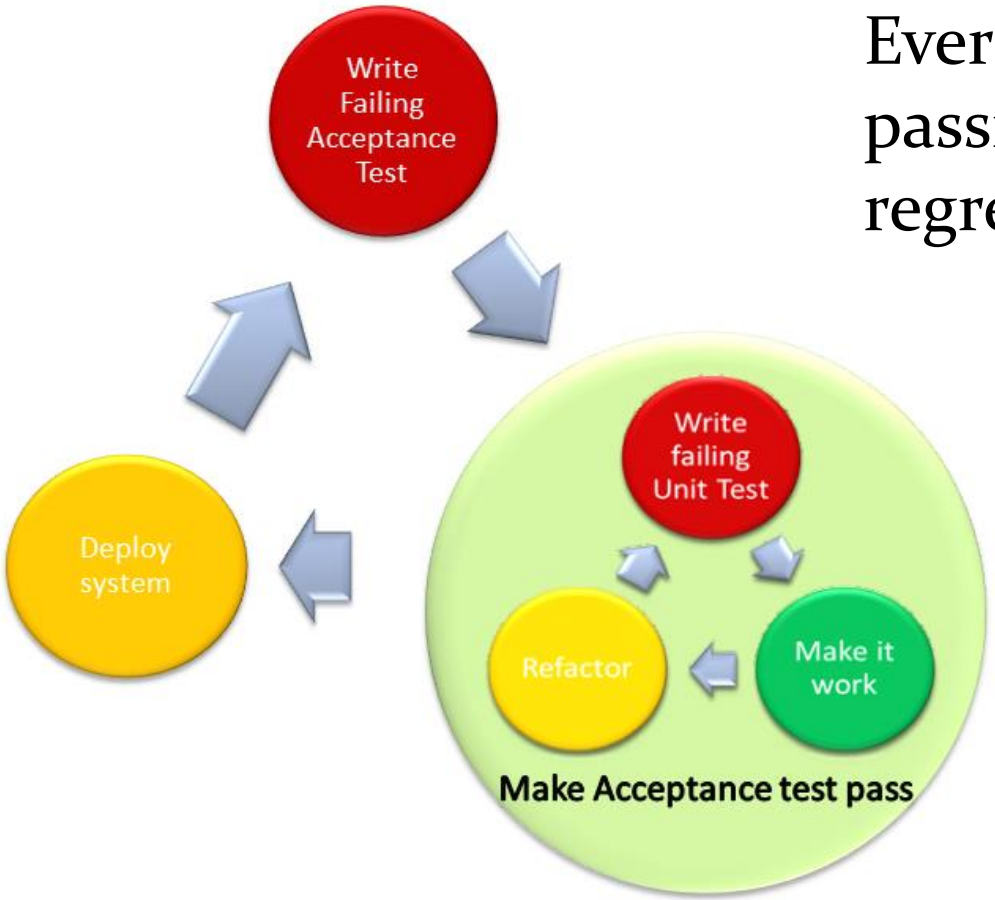
...Later...

Mom: Oh, Son, the house looks great. It's exactly what I expected. Here's the car keys and some gas money. Go have fun, dear.

History

- 1960s - Used by NASA for project Mercury
- Late 1990s and early 2000s – Various improvements, specifically around specification by example and automation
- Late 2000s - BDD become more formally defined and used as a practice
- Around 2010 - Acceptance tests evolved from BDD and tools to support automation gain maturity and begin widespread adoption

Integrating with Development



Ever-growing suite of passing tests are used as regression tests

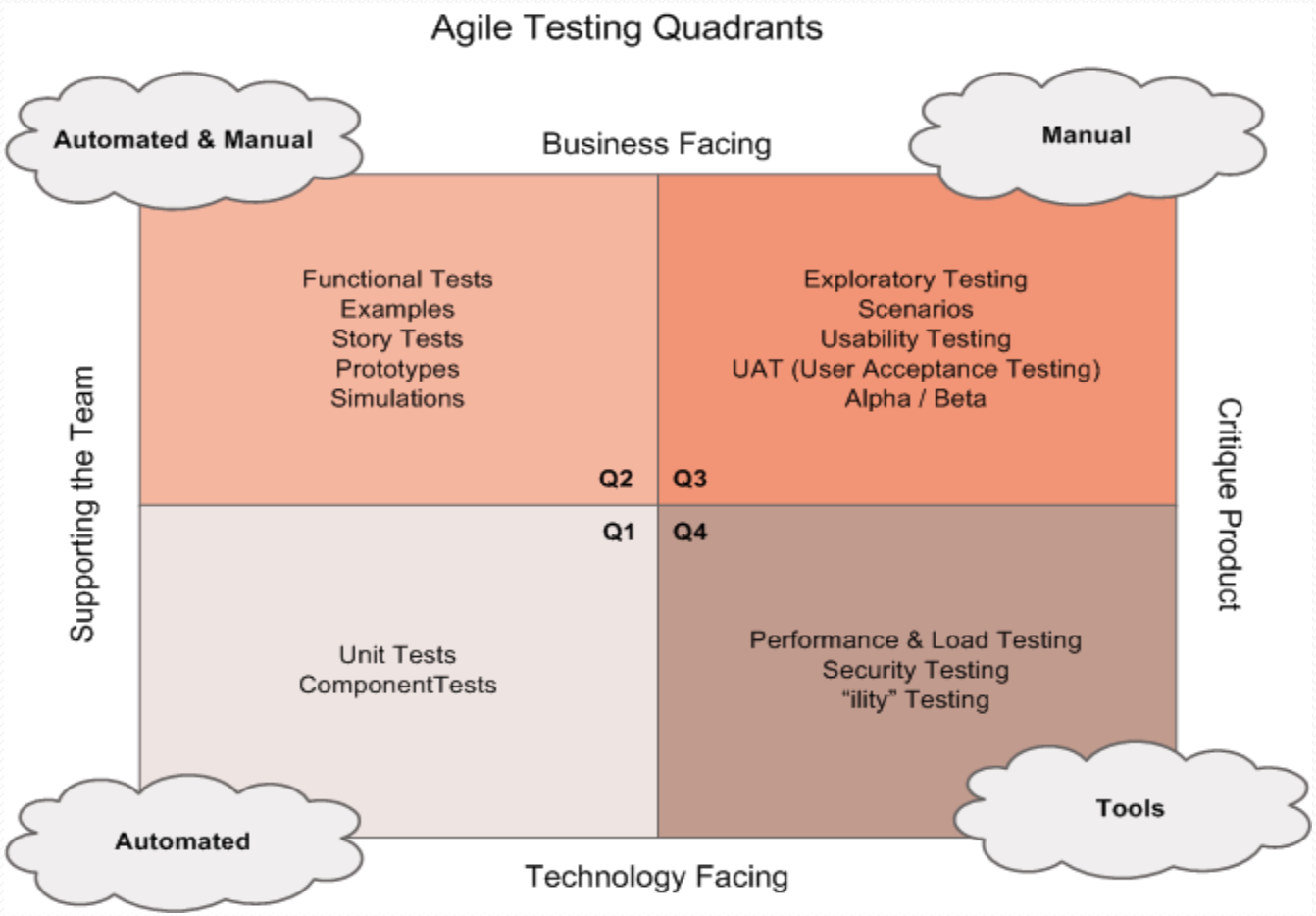
Should We Automate

MAYBE?!?!

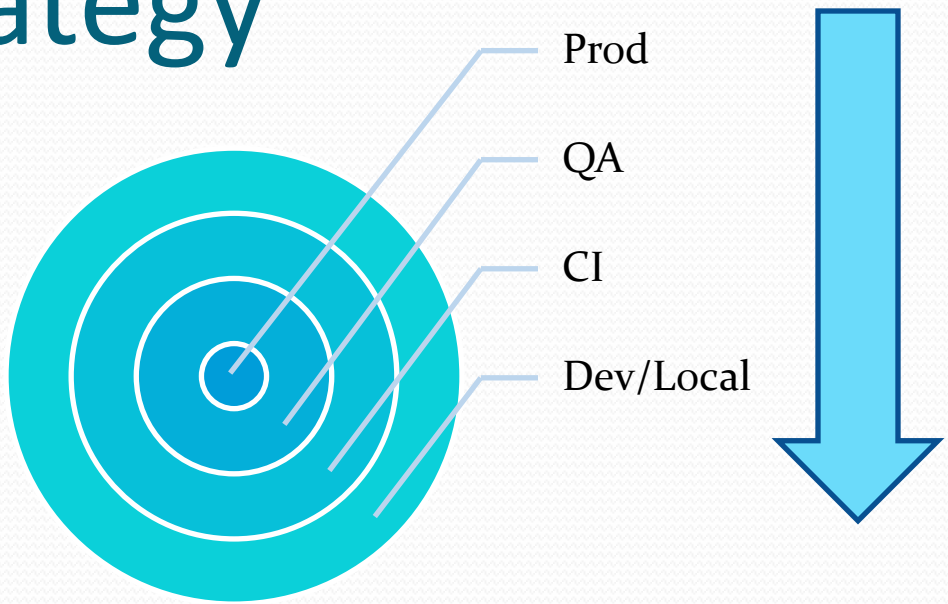
Should We Automate

- Difference between automating and utilizing automation
- Can we support the automation in the long term
- Decision for each test

Test Strategy



Test Strategy



- Build tests for how you will validate a production deployment
- Finish with tests around fine grained functions that can only run locally

What's the Process Again?

Gather Requirements	• Epics, stories, tasks, notes • Acceptance criteria
Have a Conversation	• Affirm understanding • Make sure the team is on the same page
Define Done	• What's the QA strategy for the piece of work • Use the test quadrants as a guide
Write tests	• Automate what you can, write manual tests • Create non-functional tests, get test data
Build the system	• Developers using the tests to drive their work
Perform any remaining QA	• Manual, non-functional, exploratory, etc. • Get user feedback

ATDD Benefits

- Clear definition of done
- Fewer debates about delivered vs. expected functionality
- Quickly understand scope
- Less likely to build unrequested features
- Spend time preventing defects rather than fixing them
- Reduces pre-implementation defect triage
- Quickly discover areas of misunderstanding

Not a Silver Bullet

- You might still build the wrong things (though they will be well tested!)
- Does not replace a testing strategy
- Does not eliminate project planning
- Requires high level of communication
- Does not eliminate meetings
- Still need to write very good tests
- Does not eliminate system or data dependencies

Barriers to Entry

- Need to reverse the development process, creation of failing tests must come first
- Developers need to have ability to run tests during development
- Perceived cost increase, increased visibility into cost of testing
- Typically involves automation, may need to augment skills of team members
- Reliance on record-playback tools
- Resistance to change
- Previously failed adoption attempts

Measuring Improvement

- Number of defects found in production
- Number of design defects
- Number of testing cycles
- Time spent waiting for tests to be written or test cycles to complete
- Ramp-up/onboarding time for new team members
- Time spent clarifying requirements after completion of development

Smoothing out the Bumps

- Let the customer drive the process, keep them involved throughout
- Have developers and testers working at the same level of granularity
- Automate to improve efficiency and feedback cycles
- Build smoke tests and run them often
- Have developers and testers work in pairs
- Address data and system dependencies
- Stop thinking of testing as a project phase