

# Crisis-Proof Your Software Testing Budget:

Proven Ways to Reduce Costs



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# Agenda

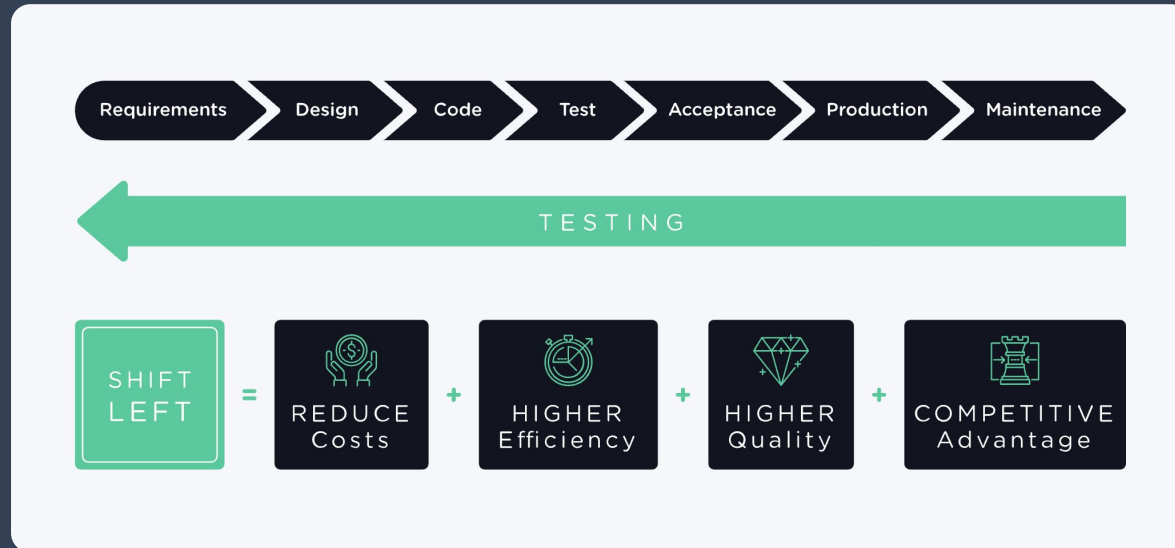
- 1 Optimize Testing Cost
- 2 Optimize Infrastructure and Tooling Cost
- 3 Optimize Training Cost
- 4 Optimize Processes

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# Optimize Testing Cost

# Shift Left Testing

Involve testing as soon as possible or before



# Advantages of Shift Left Testing

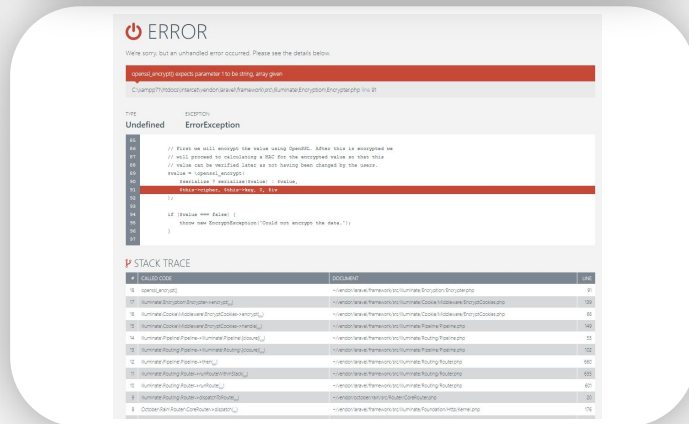
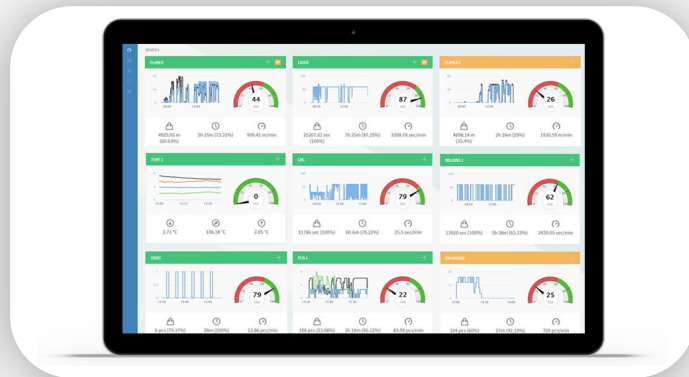
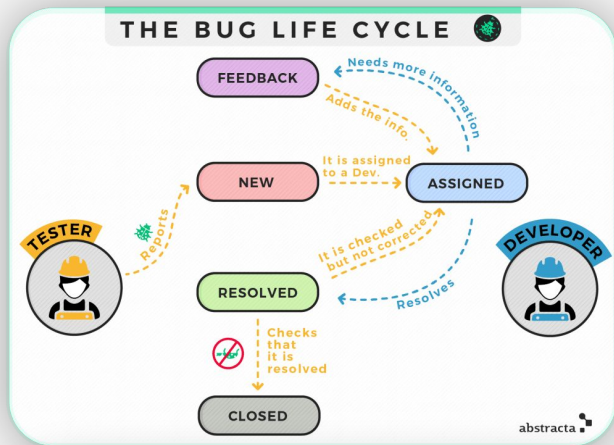
- Prevent errors => reduce re-work
- Testers' learning curve



# Shift Right Testing

- It's not only about running test cases in production.
- It's about learning from your users and how they and the infrastructure behave in production and improve testing with this information.

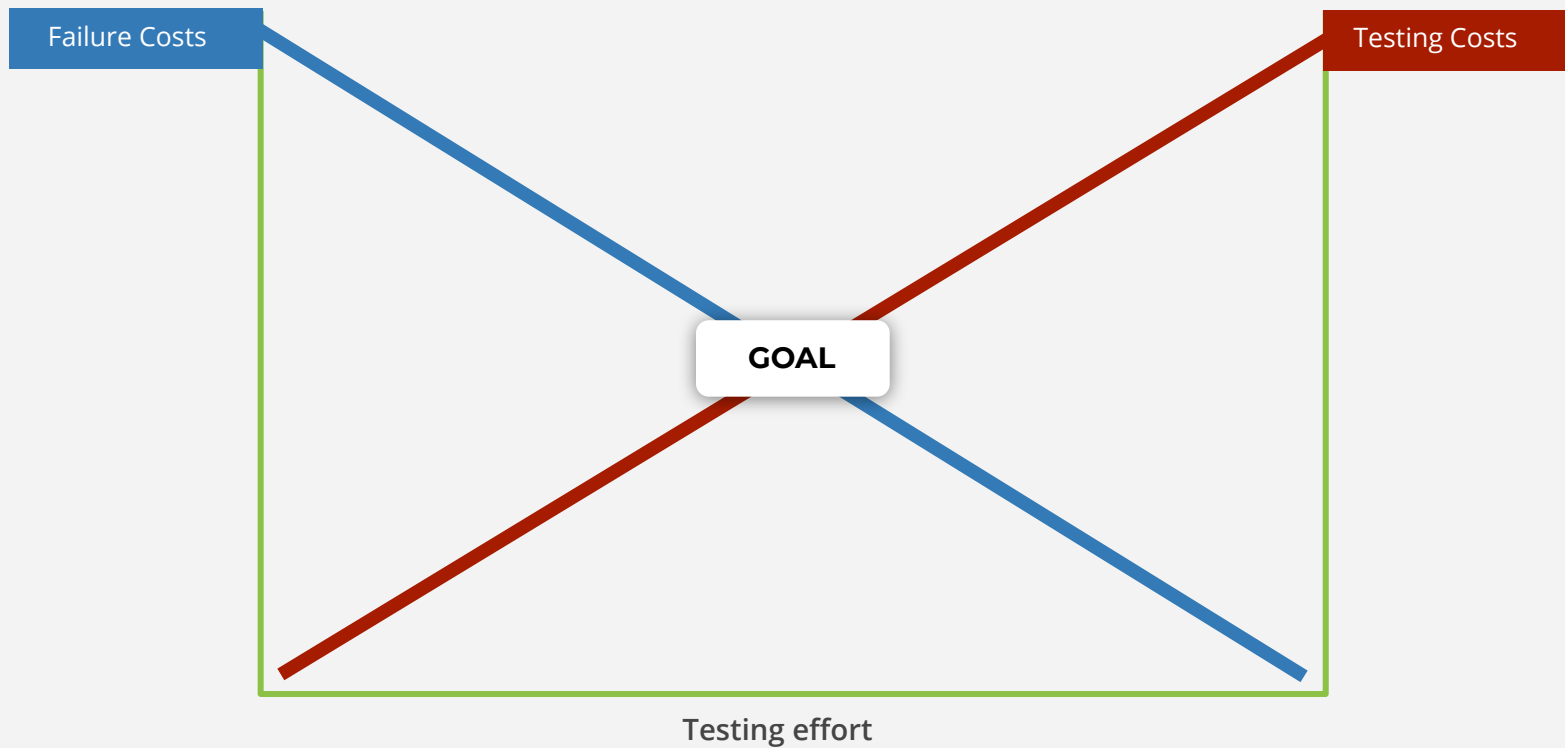
# Shift right testing



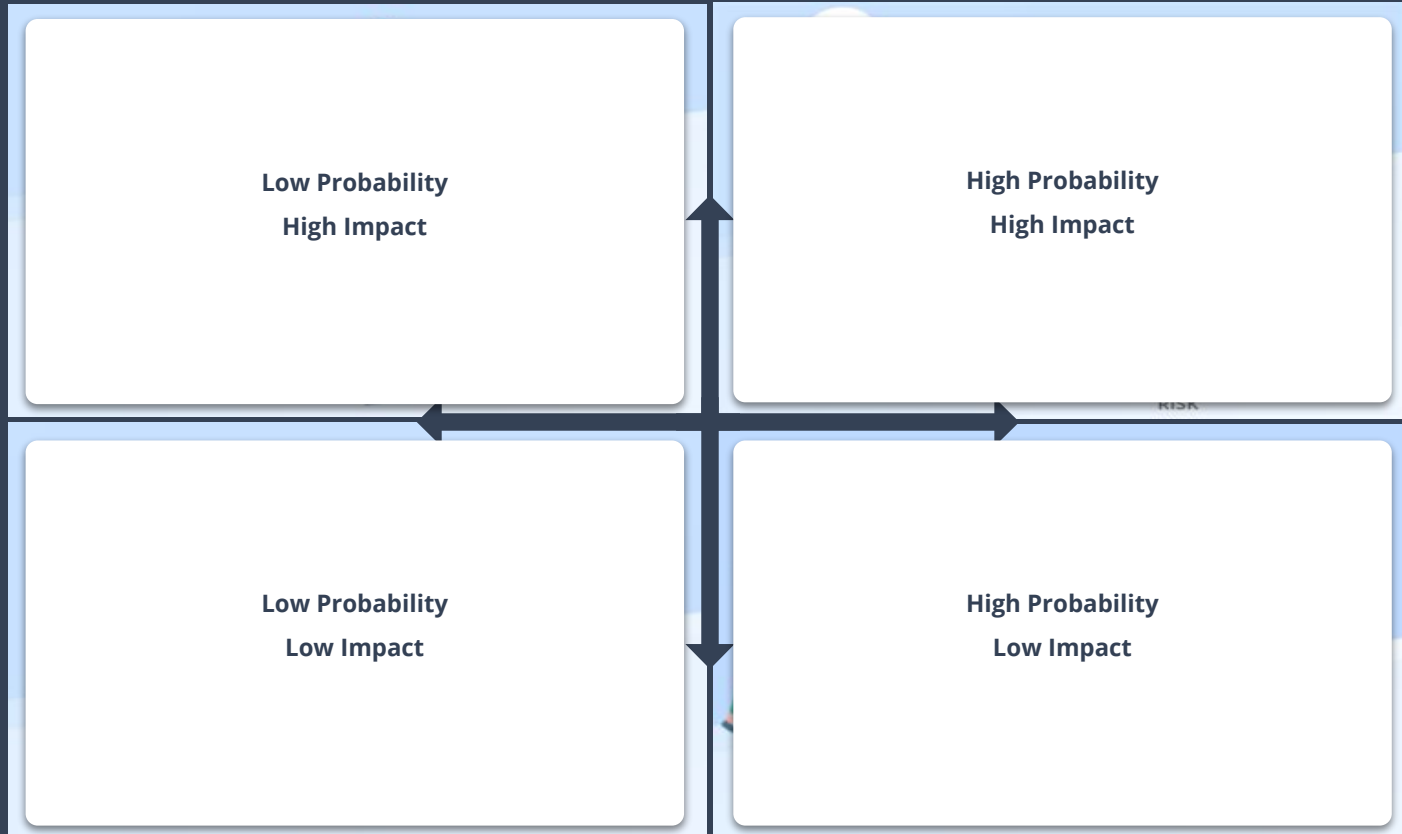
# Risk-based Testing

- Testing everything shouldn't be your goal. It is impossible.
- Focus on risk (probability \* impact).
- Analyze ROI. Prioritize. "Pareto-ize" it!

# Analyze ROI



# Risk Matrix - MoSCoW



# Documentation

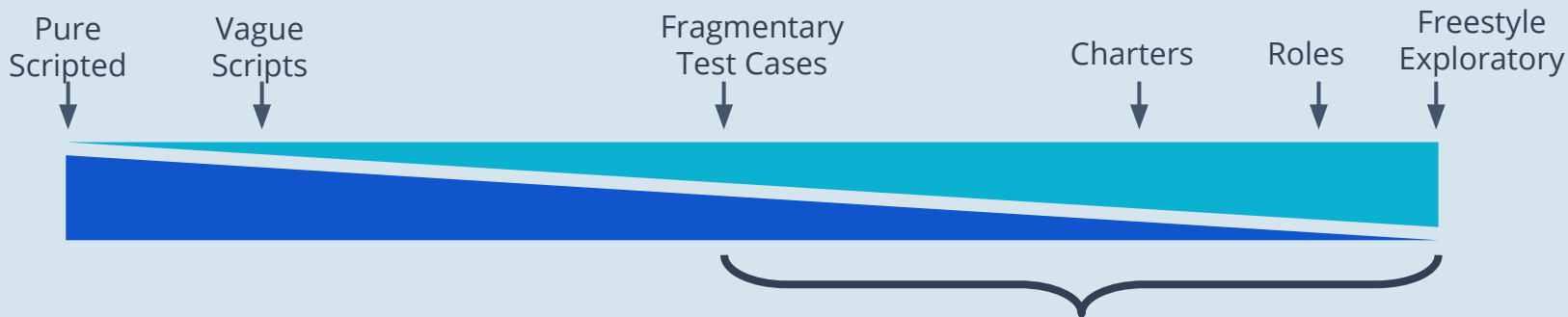
## Alternatives

- Simpler documentation
- Mind maps

Ask the consumers, don't make assumptions!

# Functional testing

## The Scripted/Exploratory Testing Continuum



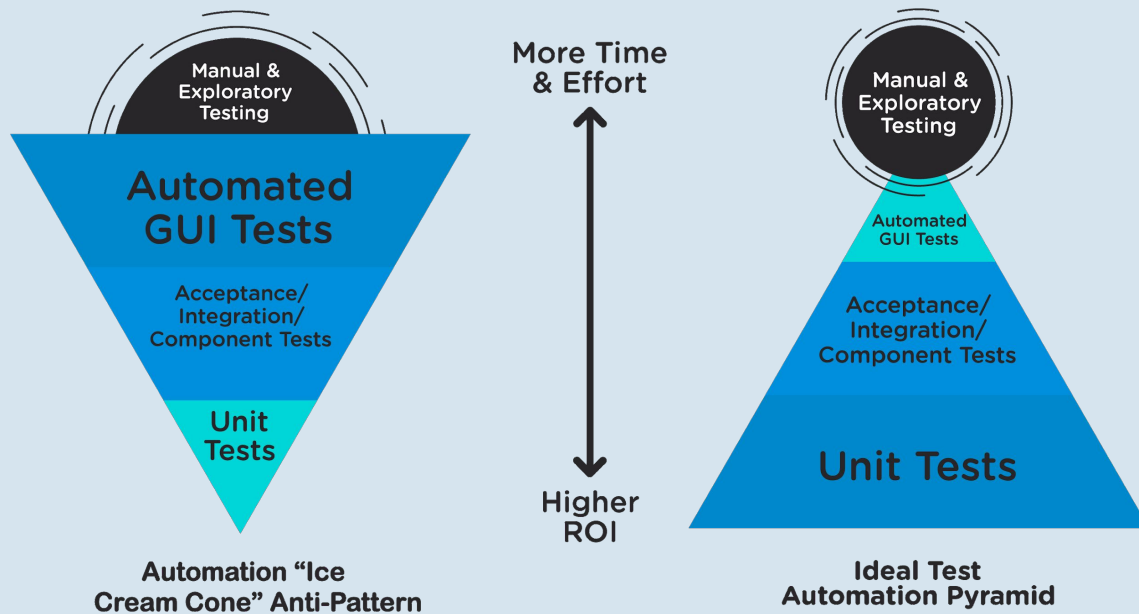
When I say "exploratory testing" and don't qualify it, I mean anything on the exploratory side of this continuum

Jon Bach

# Test automation

- More focus on the API layer
- Same with performance
- Run sooner and more frequently

# Optimize your testing strategy



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Optimize  
**Infrastructure**  
and Tooling Costs

# Migrate to open source

- Reduced cost in mid / long - term
- Initial investment



# Migrate to open source

## Tools to facilitate the migration

- From LoadRunner to JMeter
- <https://shiftleft.blazemeter.com/>



# Adopt New Tools

- BlazeMeter - reduce infrastructure cost
- Testim - reduce maintenance cost
- Apptim, Up9, etc.

# Improve resource consumption

Can you reduce the number of instances required to provide a quality service to your users?

# Improve resource consumption

## Do some performance engineering

### CPU

- Optimize top SQLs

### Memory

- Analyze most common and heavy objects

### Network and disk

- Optimize images sizes or any other transferred data
- Optimize use of caché (also Content Delivery Network)

## Use Application Management Tools (APM)

# Improve resource consumption

## Testing environments

- Use test doubles (Wiremock, Mountebank, Wiresham)
- Do we need to run all the tests in all the browsers?

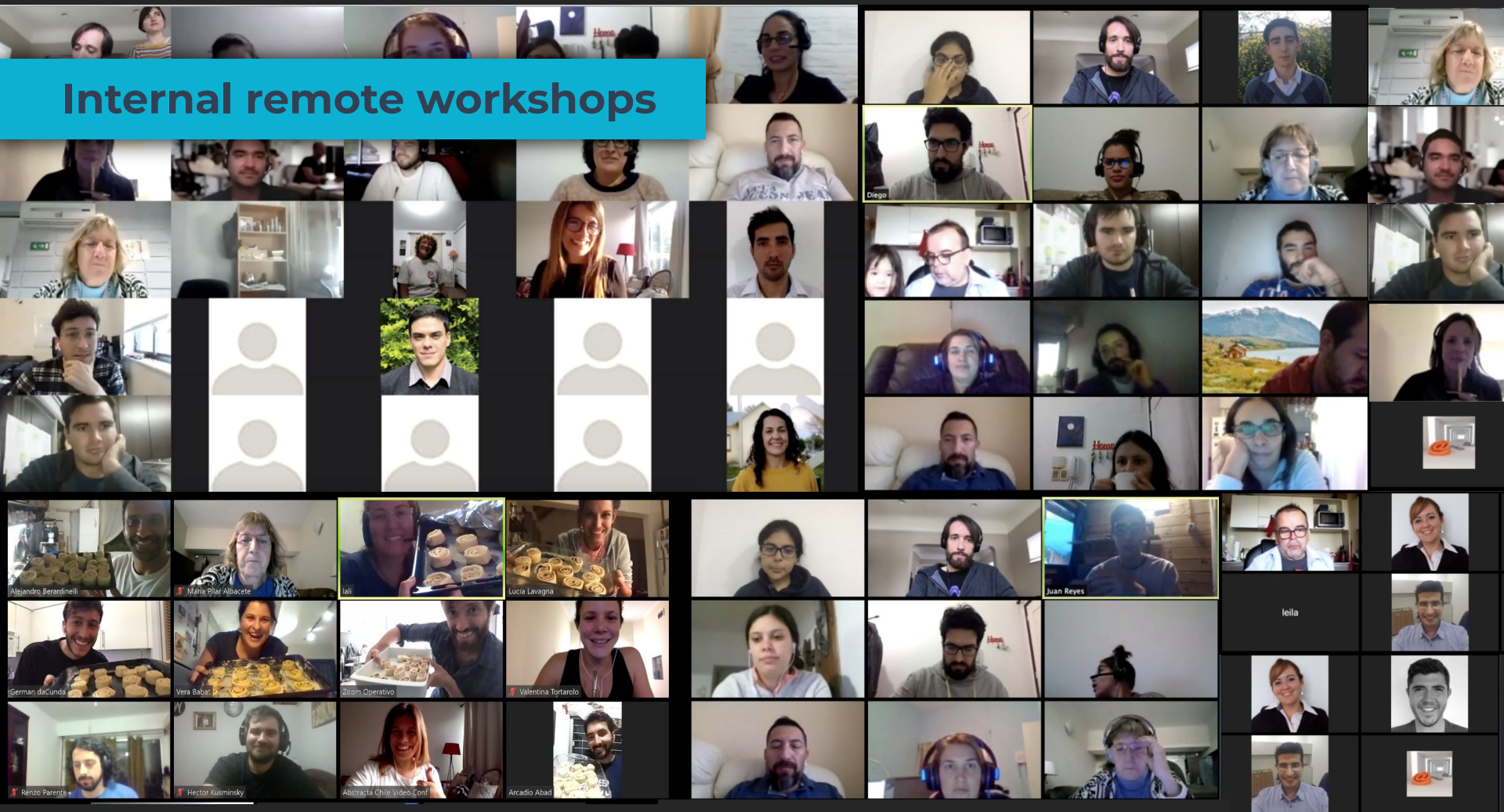
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# Optimize Training Costs

# Encourage sharing

- Internal webinars and workshops
- Share experiences and best practices (and also failures)

# Internal remote workshops



# Online platforms



# Webinars and Online Confs

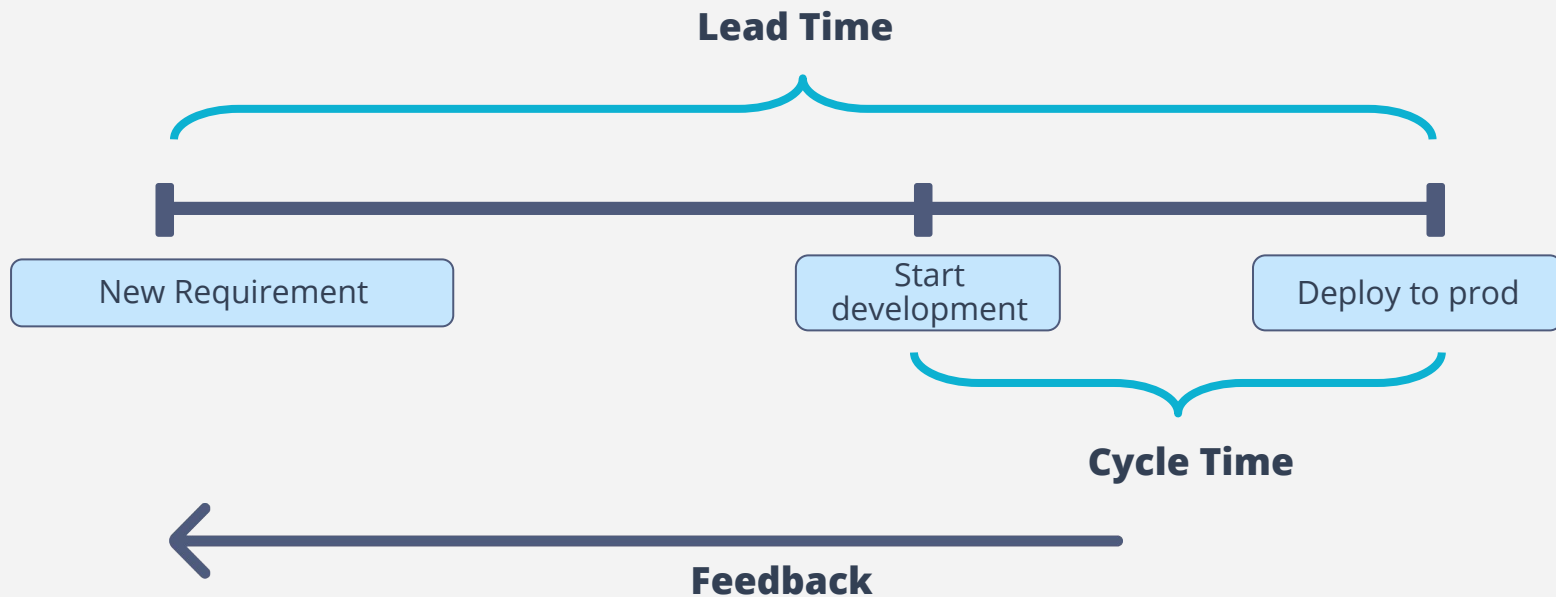
- Webinars (past and future)
- Online conferences
- Check [our Youtube Channel](#)
- Podcasts



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# Optimize **Processes**

# Lean - Continuous Delivery





Wastes  
Tools  
Processes



TEAM

Bonding  
Communication  
Interaction  
Skills  
methodology



GOALS



Requirements



CHANGES  
FEATURES  
BUGS



TRACEABILITY

Test  
strategy

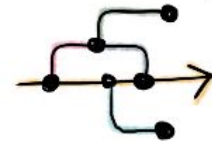


EXPLORATORY



Development

BRANCHING



CODE QUALITY



Delivery

PIPELINES  
CI/CD



Production

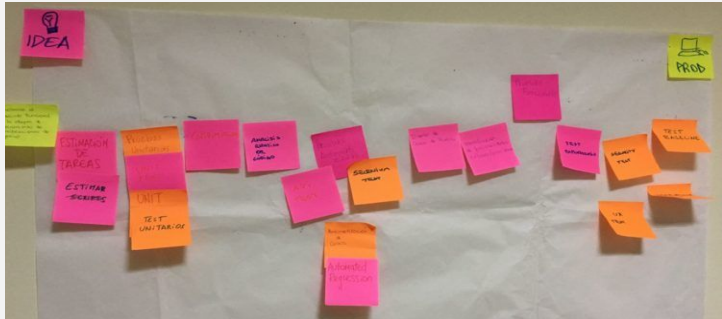
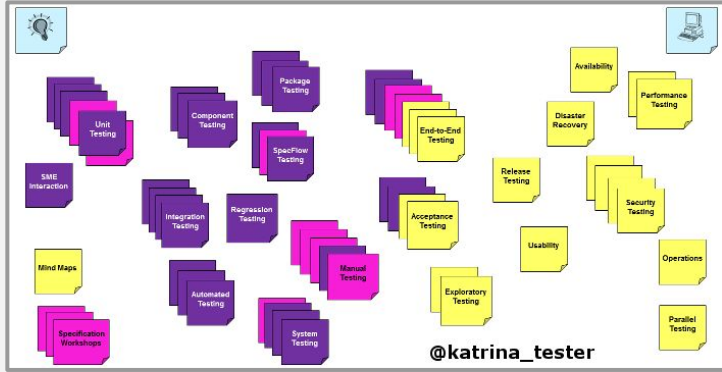
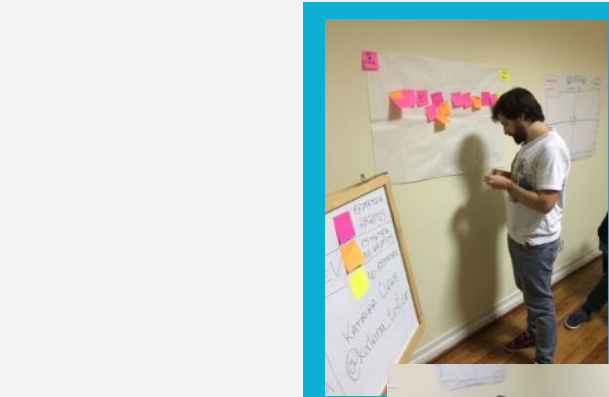
RECOVERY  
MONITORING  
LOGS  
A/B TEST

ENVIRONMENTS



# Look for wastes

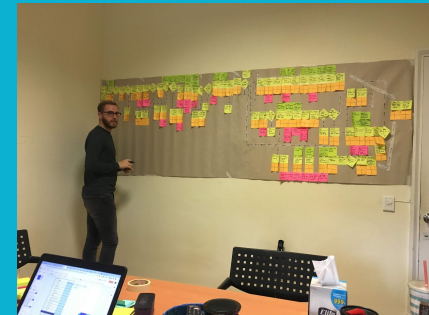
- Bottlenecks, Waits
- Extra stock
- Extra processing
- Errors => Rework



# Requirement Journey Map



<https://www.federico-toledo.com/dinamica-requirement-journey-map/>



# Engagement models

- In house testing team
- **Outsourcing**
- Crowdsourcing

# Summary

# Summary...

- 1 Do more with what you have.
- 2 Identify and reduce waste.
- 3 Take advantage of free stuff.

## More resources...

### Blogs:

[www.abstracta.us/blog](http://www.abstracta.us/blog)

[www.federico-toledo.com](http://www.federico-toledo.com) (Spanish)

### Quality Sense Podcast

<https://soundcloud.com/qualitysensepodcast>



**A smooth sea  
never made a  
skillful sailor**



# ¡Gracias! Thank you!



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