

Reimagining Test Automation with AI

Anand Bagmar
Software Quality Evangelist

```
set      test  3>>x  7D  x  fp  {:4}
{'a':1,'b':2}  fp  test  3>>x  set
7D  ={'a':1}  >>  {:4}  =new
fp  {:4}  3>>x  x  fp  4>>x={'a':1}
3>>x  set  {'a':1,'b':2}  =new
x  >>  7D  ={'a':1}  3>>x
test  {:4}  fp  set  >>
```

ABOUT ME

  BagmarAnand

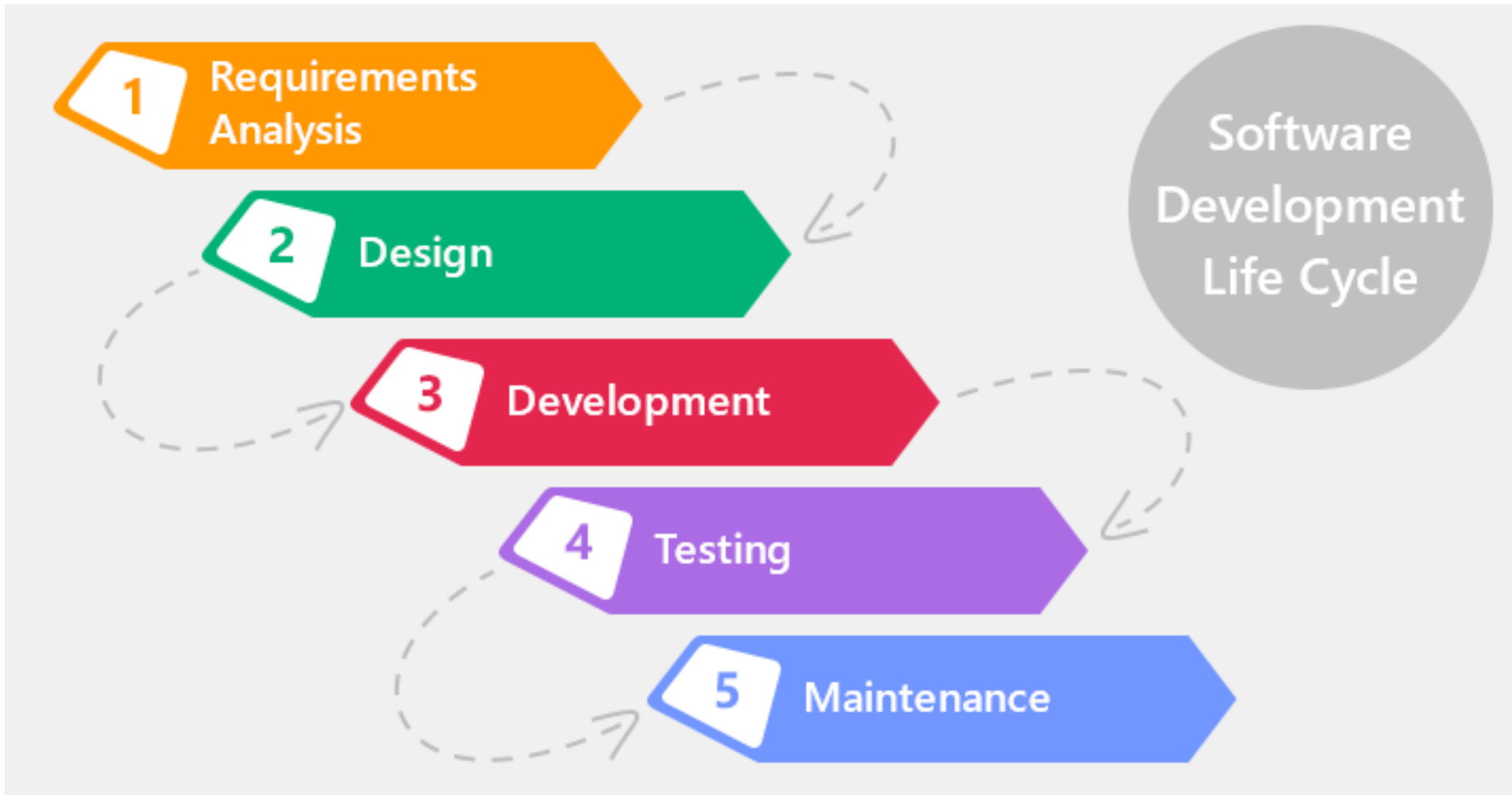
 [linkedin.com/in/anandbagmar/](https://www.linkedin.com/in/anandbagmar/)



 **appliteools**



WATERFALL



<https://xbsoftware.com/wp-content/uploads/2014/10/software-development-life-cycle.png>

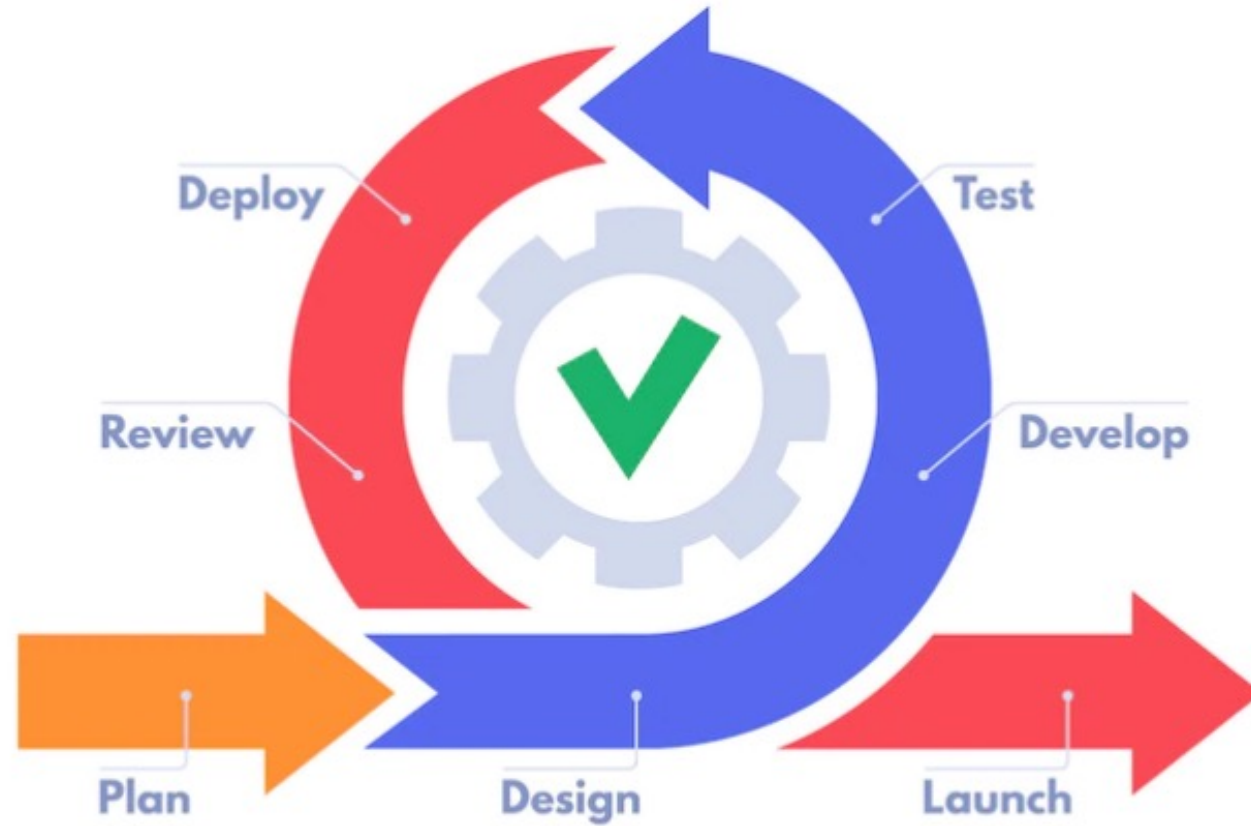


AGILE + XP

[https://i.dailymail.co.uk/1s/2019/07/03/11/15517686-7203833-Contact This is the dramatic moment a leopard appeared to fly th-a-1 1562150881521.jpg](https://i.dailymail.co.uk/1s/2019/07/03/11/15517686-7203833-Contact+This+is+the+dramatic+moment+a+leopard+appeared+to+fly+th-a-1+1562150881521.jpg)

  @BagmarAnand

AGILE



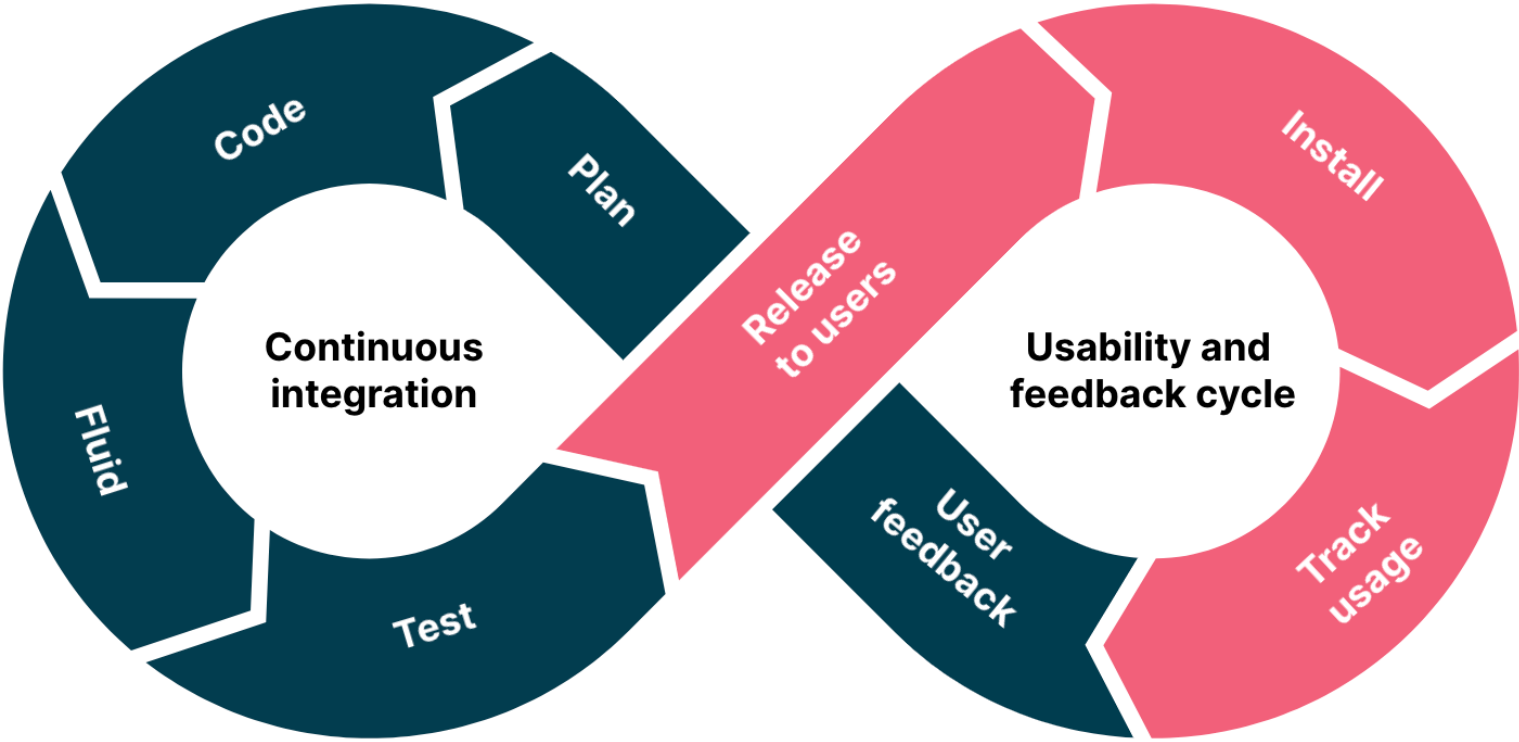
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AGILE SOFTWARE DEVELOPMENT LIFE CYCLE



<https://bitbytesoft.com/wp-content/uploads/2022/01/Agile-software-Development-Life-Cycle-1-1024x356.jpg.webp>

Continuous delivery



https://www.thoughtworks.com/content/dam/thoughtworks/images/photography/inline-image/insights/blog/continuous-delivery/blg_inline_cd_not_just_technical.png

AGILE Testing

Iteration 0

Story test analysis for Iteration 1

Test Automation
- strategy,
framework
setup, etc.

<https://www.slideshare.net/abagmar/agile-qa-process>

Iteration 1

IPM

Iteration 1
Story testing
(manual +
automation)

*Story test
analysis for
Iteration 2*

<https://www.slideshare.net/abagmar/agile-qa-process>

Iteration 2

*Showcase
Iteration 1,
IPM*

*Complete
Iteration 1
Story testing*

*Complete
Iteration 1
Automation*

**Iteration 2
Story testing
(manual +
automation)**

**Test
Automation
maint.,
execution**

*Story test
analysis for
Iteration 3*

<https://www.slideshare.net/abagmar/agile-qa-process>

Iteration 3

*Showcase
Iteration 2,
IPM*

*Complete
Iteration 2
Story testing*

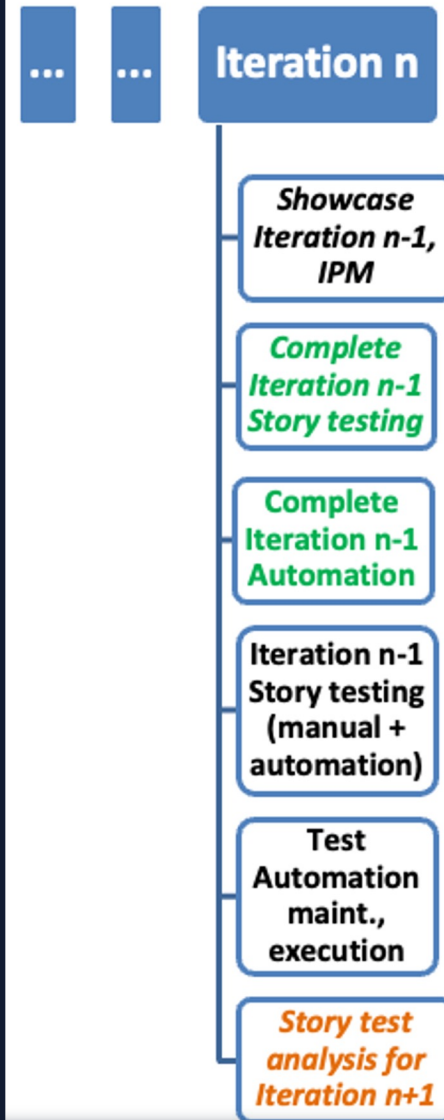
*Complete
Iteration 2
Automation*

**Iteration 3
Story testing
(manual +
automation)**

**Test
Automation
maint.,
execution**

*Story test
analysis for
Iteration 4*

<https://www.slideshare.net/abagmar/agile-qa-process>



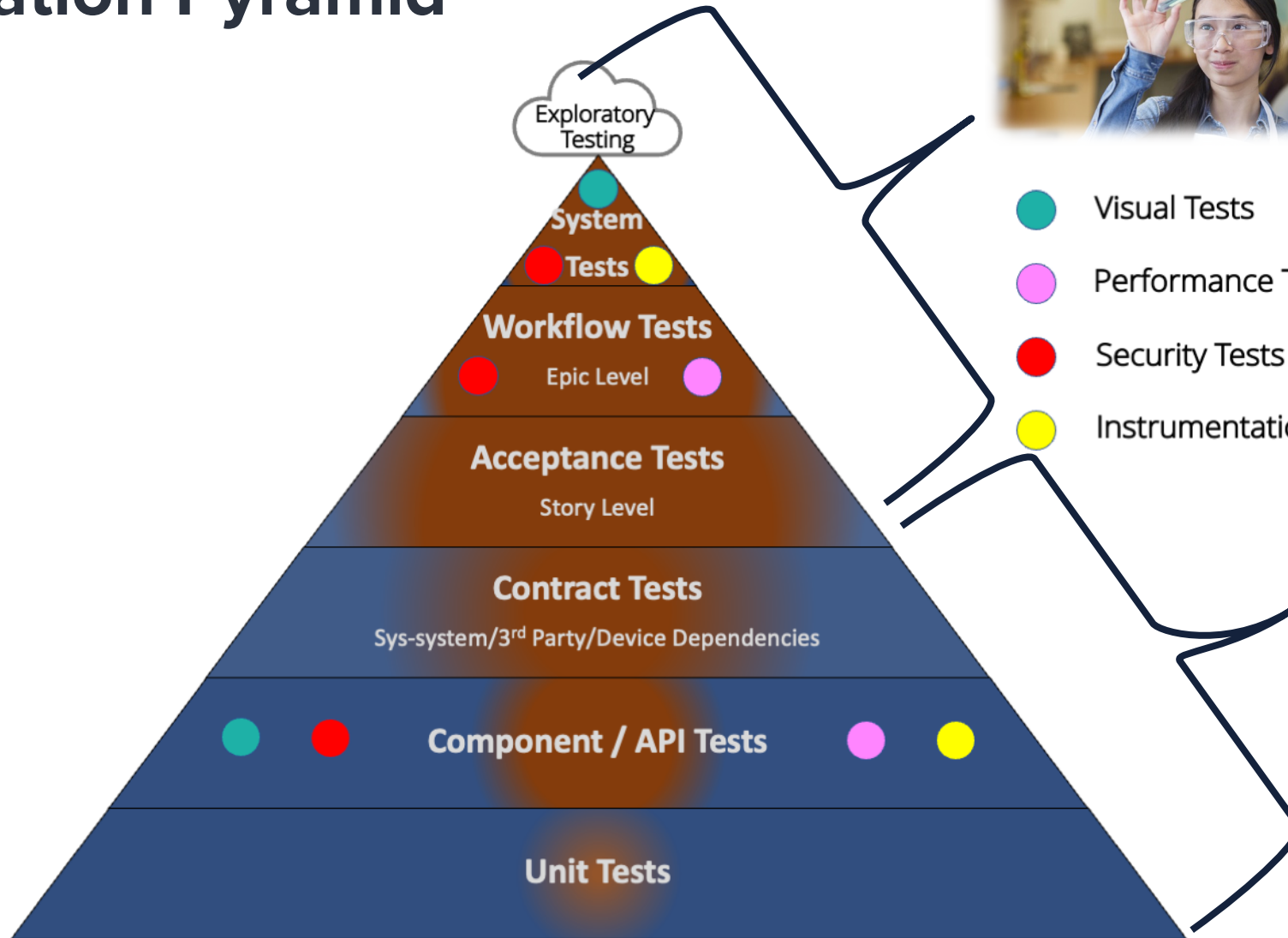
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Test Automation Pyramid

Slow
More integration
Expensive

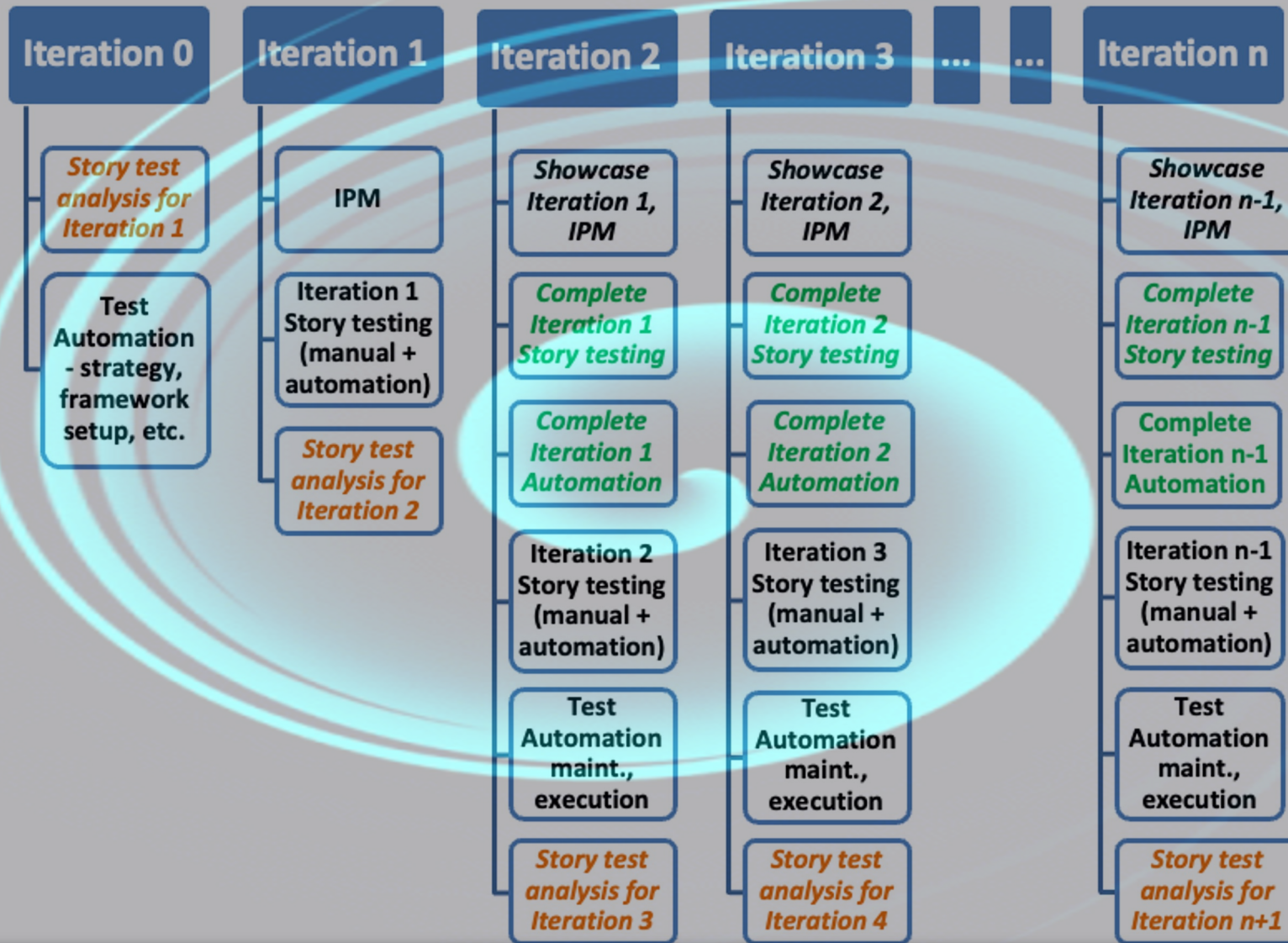


Fast
More isolation
Cheap



- Visual Tests
- Performance Tests
- Security Tests
- Instrumentation Tests





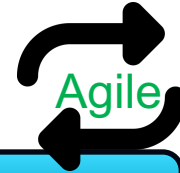
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Automation Approach

Waterfall Vs Agile

Waterfall

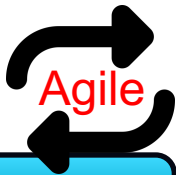


Agile

Test Case Design

Waterfall Vs Agile

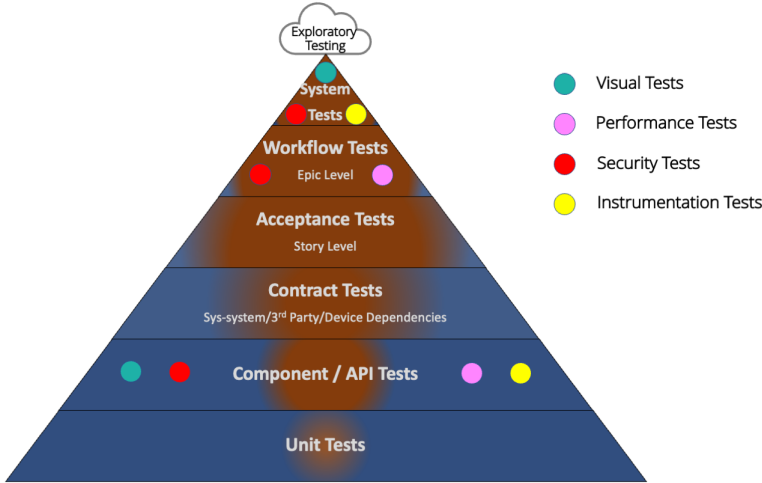
Waterfall



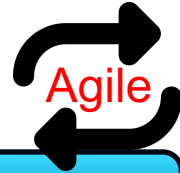
Waterfall



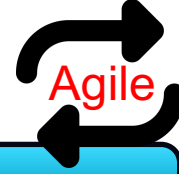
Waterfall Vs Agile



Waterfall



Waterfall

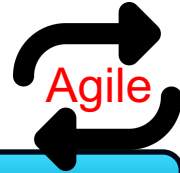


Waterfall

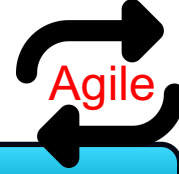


Waterfall Vs Agile

Waterfall



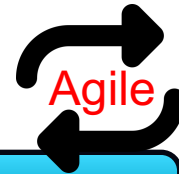
Waterfall



Implementation



Waterfall



Validation

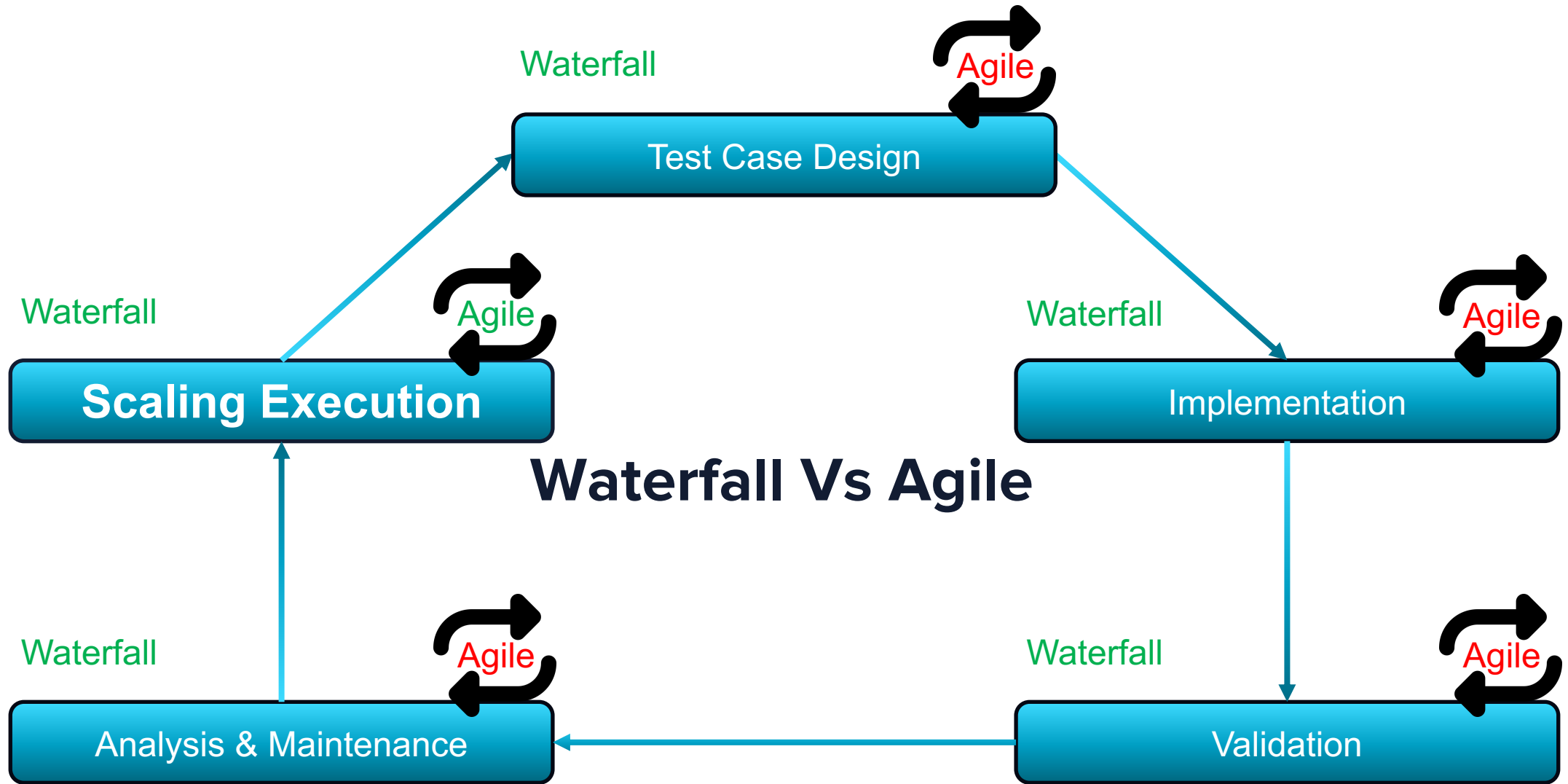
Waterfall Vs Agile

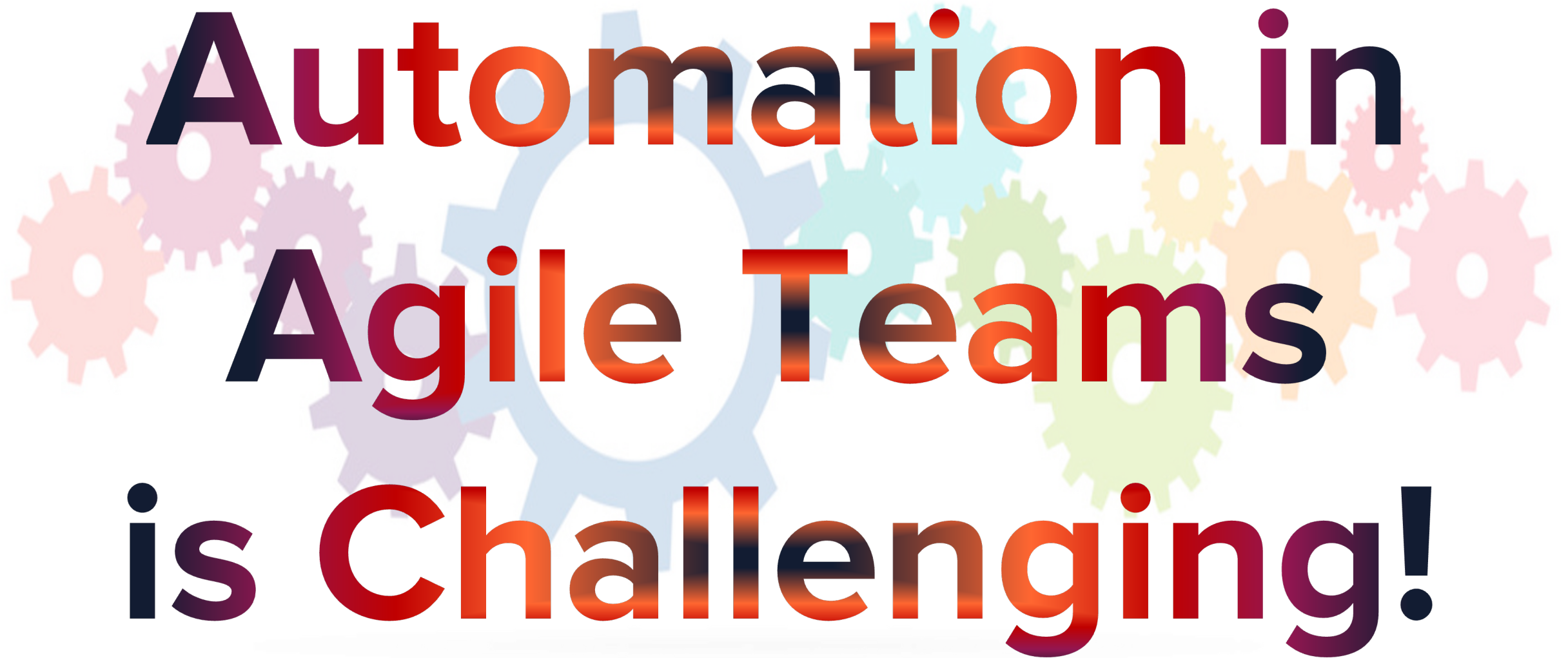
Waterfall



Analysis & Maintenance







Automation in Agile Teams is Challenging!

What is next?

Behavior Driven
Development (BDD)

Custom
Frameworks

Record &
Playback

Core
Framework

<https://www.slideshare.net/abagmar/future-of-testing-test-automation-and-the-quality-analyst>



FUTURE OF TEST

AUTOMATION

https://www.simplilearn.com/ice9/free_resources_article_thumb/Future_Of_Artificial_Intelligence.jpg

AI-Powered Automation

DEMO



Test Case Design

Get **higher Test Coverage**, by writing less code, and automating fewer tests



Test Case Design

Implementation

Easier, and faster to implement new tests
Integrate with **any automation tool**

 **applitools**

Test Case Design

Implementation

Validation



AI-powered Functional & Visual validation

Validates **dynamic data**

Works with **Web, m-Web, Android, iOS,**

Desktop, PDFs, Images

Test Case Design

Focus on **differences that matter**
Take quick decisions about **bugs, and**
baselines

Know your **product quality** immediately



appliteools

Implementation

Analysis & Maintenance

Validation

**AI-powered Cross-Browser
Scaling** for all browsers & devices

Stable tests with Self-Healing in
Execution Cloud

Test Case Design

Scaling Execution

Implementation



Analysis & Maintenance

Validation

Autonomous COMING SOON Testing

Summary



EVOLVE



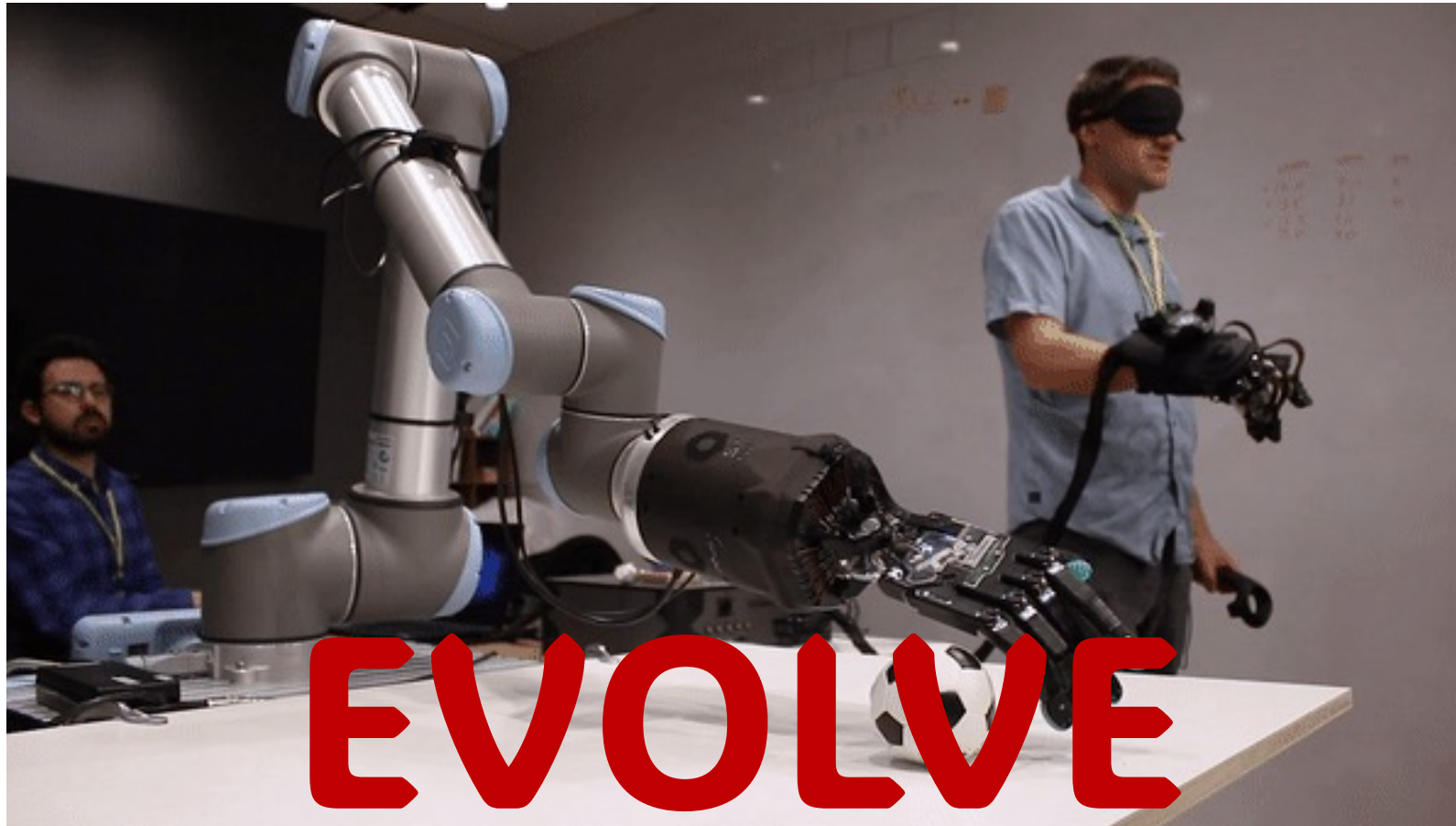
<https://images.theconversation.com/files/273978/original/file-20190513-183109-hkq02k.jpg>

EVOLVE

**Automation Strategy
Tools
Leverage AI!**

<https://images.theconversation.com/files/273978/original/file-20190513-183109-hkq02k.jpg>

Human mind is essential!



https://miro.medium.com/v2/resize:fit:1200/1*u4pQDwFF4y60VNoFWEC5vw.gif

Thank you

  BagmarAnand

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 **appliteools**

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7D  ={'a':1}  >>  {:4}  =new
fp  {:4}  3>>x  x  fp  4>>x={'a':1}
3>>x  set  {'a':1,'b':2}  =new
x  >>  7D  ={'a':1}  3>>x
test  {:4}  fp  set  >>
```