



**TEST TRENDS**

# WHAT DOES QUALITY MEAN?

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Fit for  
purpose?

Does it work?

Does it provide  
value?

faster?  
better? safer?

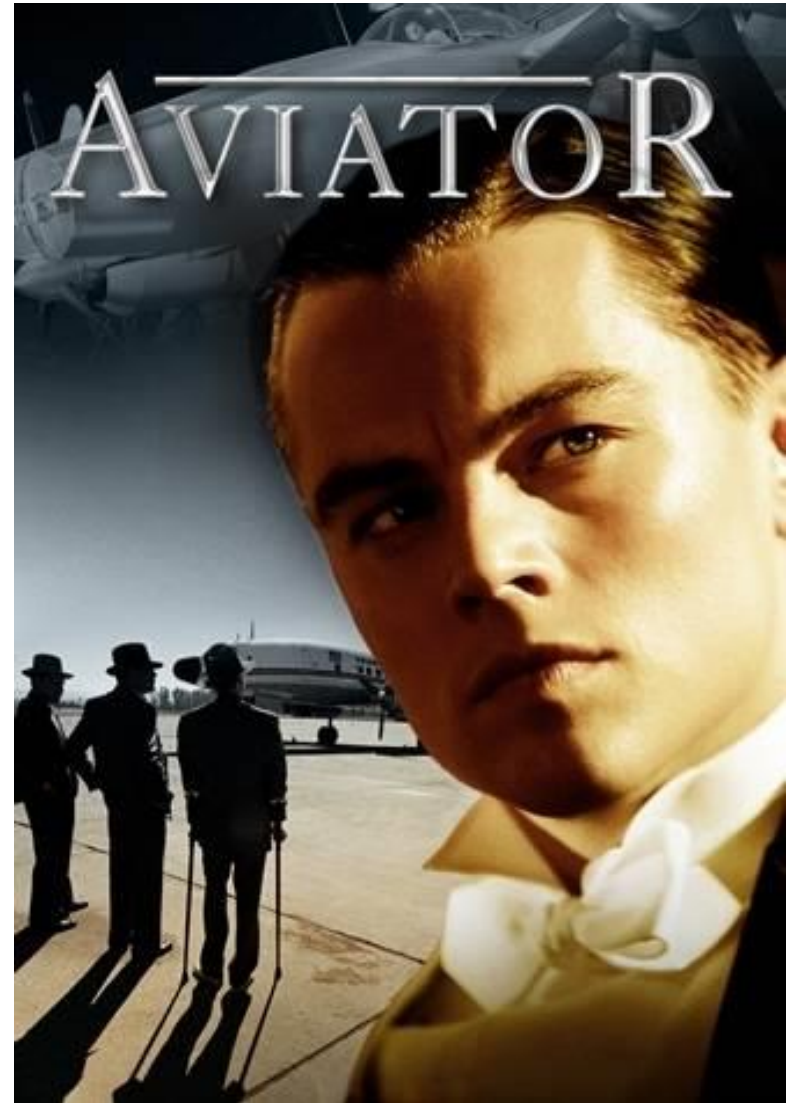
Does it make us cooler?

# WHAT HAVE WE LEARNED FROM HISTORY?

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# TESTING...





# ...IN A QUEST FOR BUGS

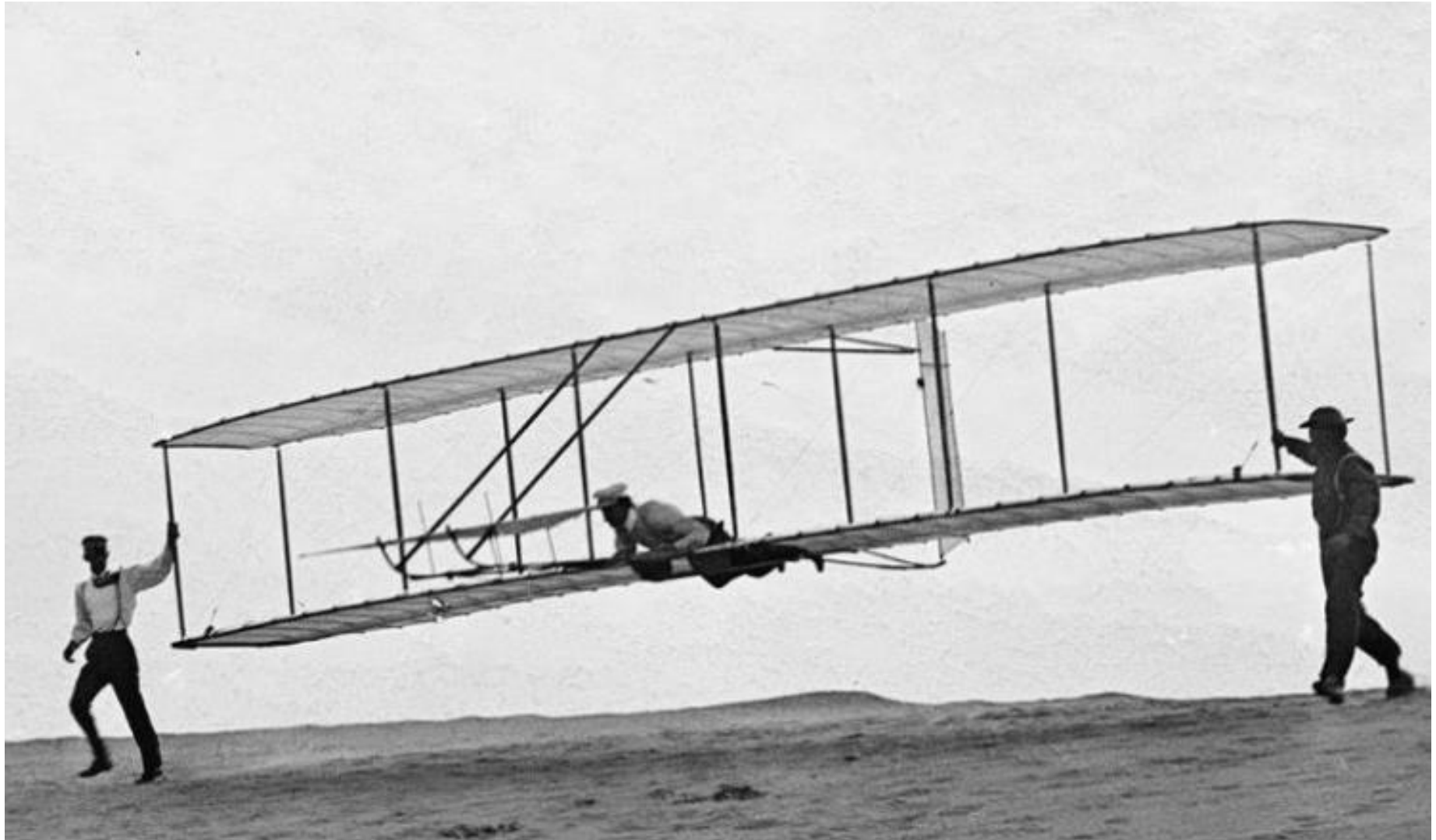
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**IEEE 829 / ISO 29119**

# EARLY TEST...

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# ...TO FAIL FAST AND STAY SAFE

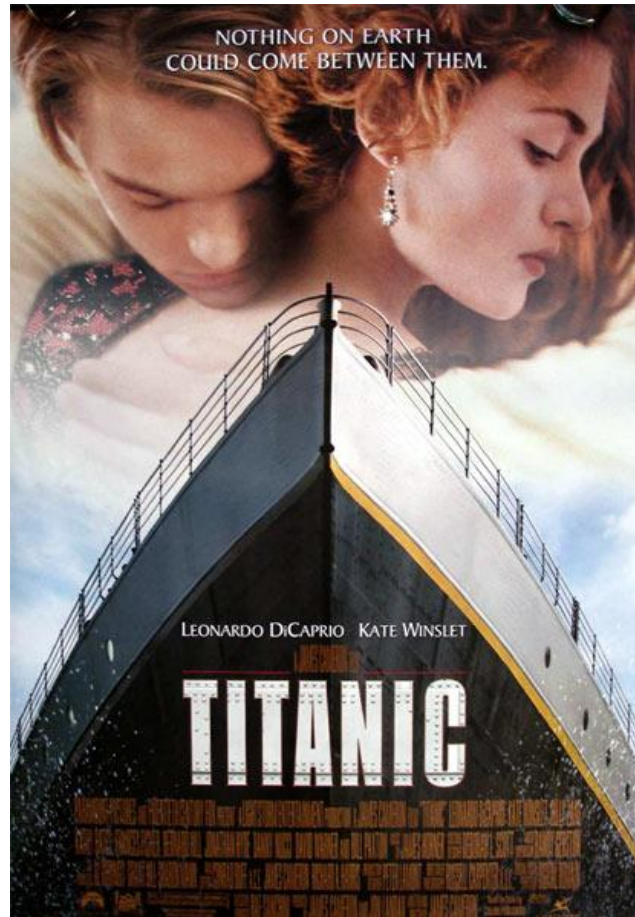
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# BUILD THE RIGHT PRODUCT

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# BUILD THE PRODUCT RIGHT

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# KEEP THE PRODUCT RIGHT

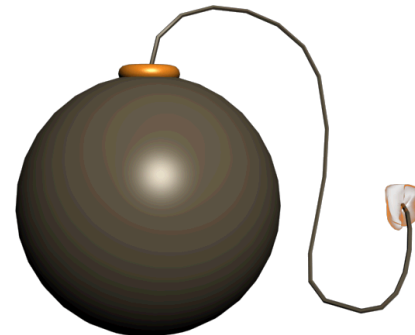
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FEEDBACK \_

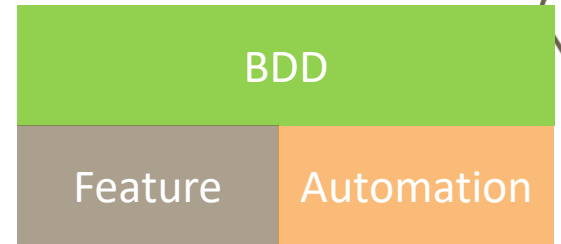
MARKET ADOPTION? \_

PRODUCT PERFORMANCE? \_

ACCIDENTS, DISASTERS  
AND BAD LUCK \_



# BLACK BOX AUTOMATION



Requirements

Domain specific language

Business process driven

Keyword driven

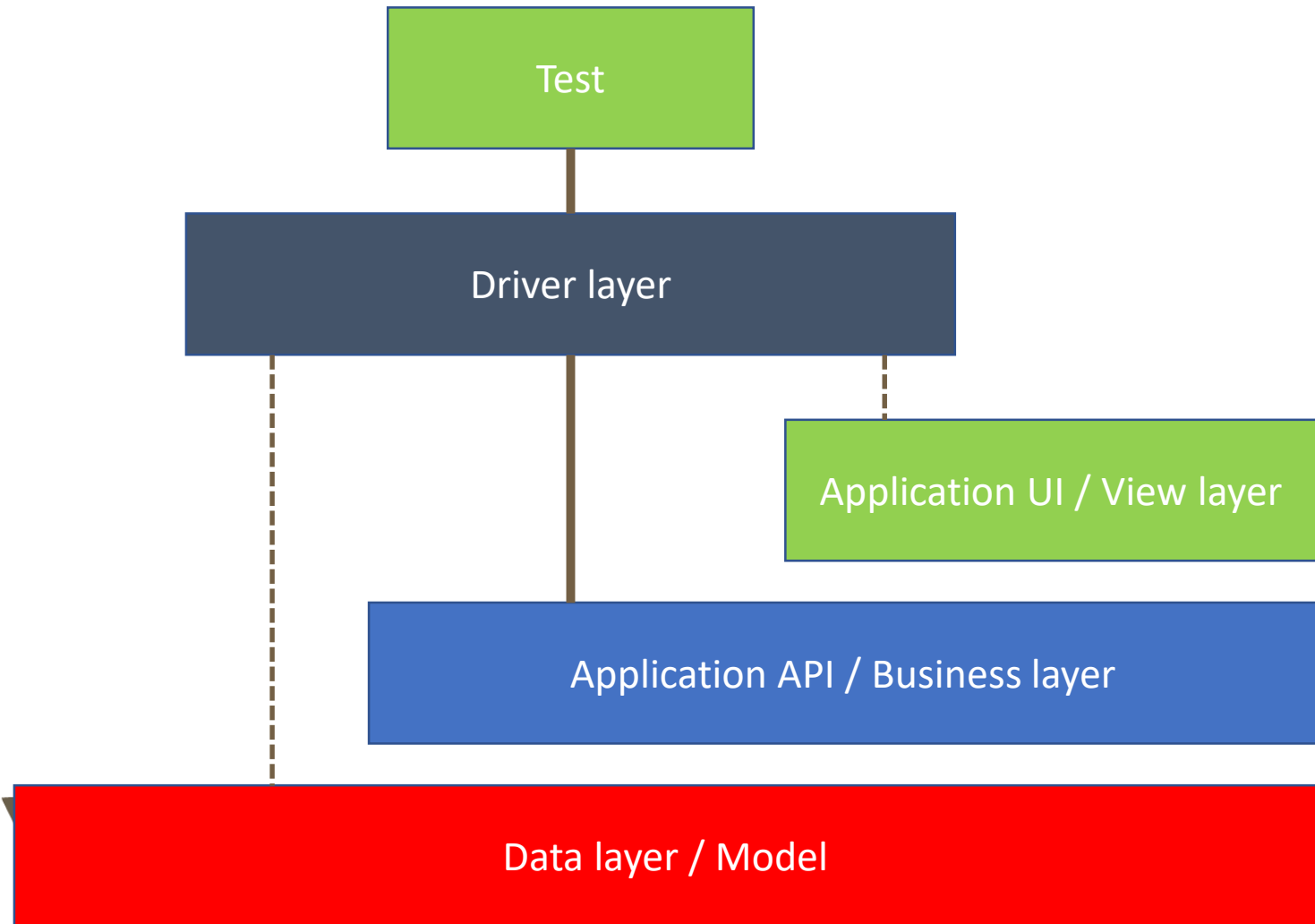
Coded tests

Capture/replay

Maturity

# TEST AUTOMATION

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# SCENARIO

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```
1 Feature: Noticeboard "[redacted]"
2
3   Scenario: Create and view news in "[redacted]" as ordinary users
4     Given I am authorized as "editor"
5     When I create news in board "[redacted]"
6     Then I see the newly created news in noticeboard "[redacted]"
```

# TEST STEPS

```
1  # -*- coding: utf-8 -*-
2  from radish import step, given, when, then, world
3  import time
4  from pages. ....loginpage import LoginPage, USERS, ENV_URL
5  from pages. ....mainpage.background import Background
6  from extensions.gherkin import given_when_then_and
7
8  @given_when_then_and('I am authorized as { :QuotedString }')
9  def authorize_as_user(step, usertype):
10     "Log out if allready logged in. Navigate to login page and log in as user"
11     # Log out...
12     step.behave_like('I am unauthorized')
13     # Initialize page objects
14     driver = step.context.driver
15     login = LoginPage(driver)
16     background = Background(driver)
17     time.sleep(1)
18     # Get a test user
19     user = USERS[usertype]
20     # Navigate to login page
21     driver.get(ENV_URL['test'])
22     # log in with the test users username and password
23     login.login(user['username'], user['password'])
24     # Store the current user, so that other steps knows who is supposed to be logged in
25     step.context.user = user
26
27     background.wait_for_content()
28     time.sleep(1)
29
30     @given_when_then_and('I am unauthorized')
31     def unauthorize(step):
32         "Check to see if any user is logged in. Then log out."
33         driver = step.context.driver
34         background = Background(driver)
35         if background.is_visible():
36             # Logout if allready logged in
37             driver.close()
38             driver.quit()
39             # Reset selenium WebDriver
40             step.context.driver = world.Driver(capabilities = world.capabilities)
41
```

# PAGE OBJECTS

```
1  # encoding: utf-8
2  "Page Objects, Elements and default data for the top menu on the main content page"
3
4  import time
5
6  from selenium.webdriver.common.by import By
7  from selenium.webdriver.support.ui import WebDriverWait
8  from selenium.webdriver.support import expected_conditions as EC
9
10 from pages.core import BasePage
11
12 class TopMenu(BasePage):
13     USER_MENU = 'zz4_Menu_t'
14     LOGOUT = '//li[a/div[@id="zz3_ID_Logout"]]'
15
16     def element_user_menu(self):
17         "Find and return the user menu element"
18         return self.driver.find_element_by_id(self.USER_MENU)
19
20     def element_logout(self):
21         "Find and return the logout button"
22         element = WebDriverWait(self.driver, 2).until(EC.element_to_be_clickable((By.XPATH, self.LOGOUT)))
23         return element
24
25     def is_visible(self):
26         "Is the top menu visible?"
27         elements = self.driver.find_elements_by_id(self.USER_MENU)
28         if len(elements)>0:
29             return True
30         else:
31             return False
32
33     def logout(self):
34         "Log out via the log out option in the top menu"
35         self.element_user_menu().click()
36         self.element_logout().click()
37         alert = WebDriverWait(self.driver, 1).until(EC.alert_is_present())
38         if alert:
39             alert.dismiss()
```

# DELIVERY PIPELINE

