

Sophia Antipolis, French Riviera
20-22 October 2015



A STAR TREK JOURNEY IN THE TRAVEL INDUSTRY

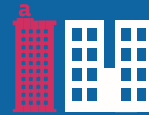
Presented by Lisa Persson & David-Olivier Saban



695 million passengers boarded



526 million bookings processed

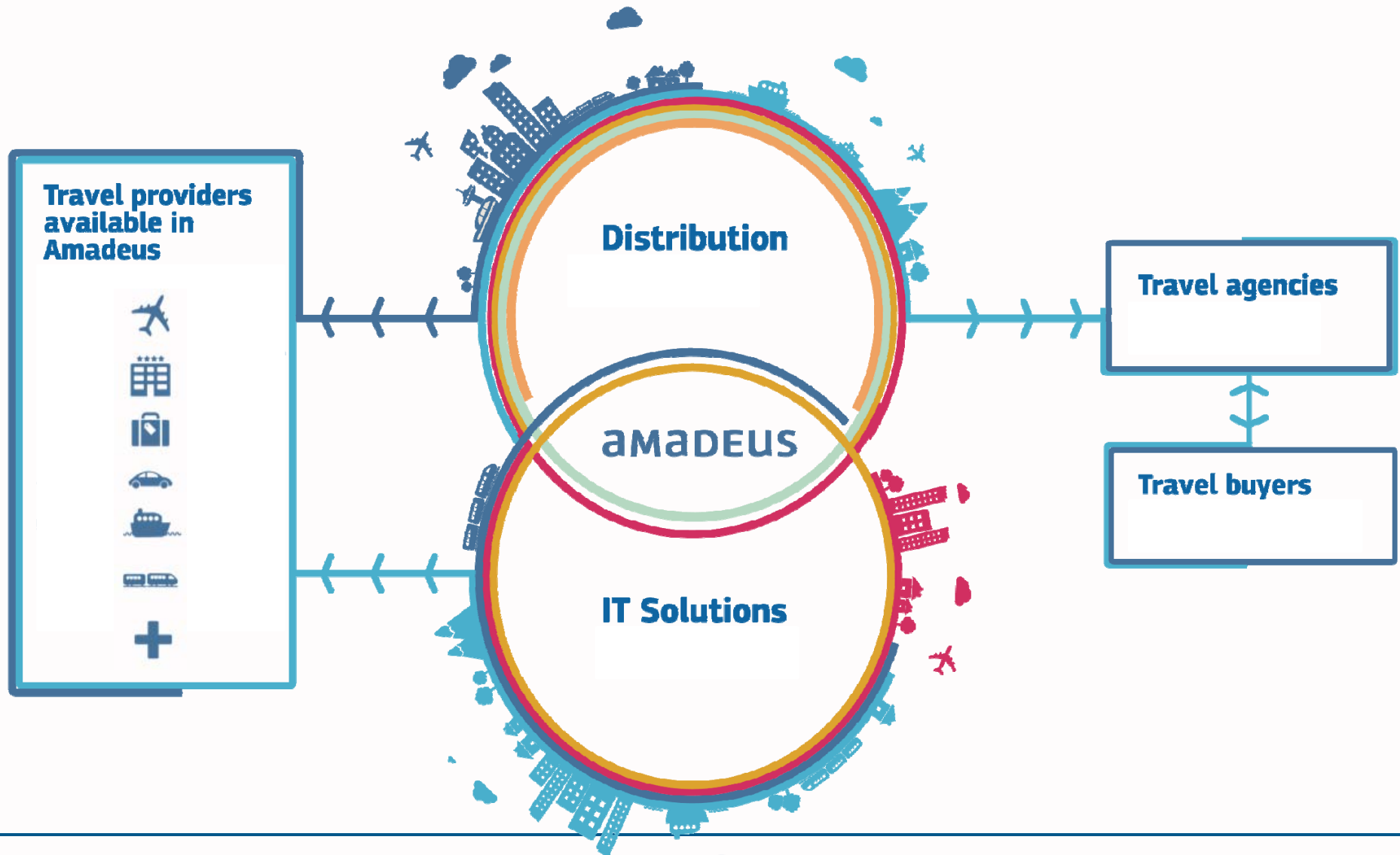


Operations in 195 countries

Let's shape the future of travel



amadeus





SUT – Systems Under Test

- Amadeus e-Travel Management

+7,300




Corporate Customers

+8.5m



Bookings in 2014

+8.1m



Active users

- Selling Platform Connect

400K




Points of sale equipped

+200



Countries

70%



% of TA bookings



The road less travelled



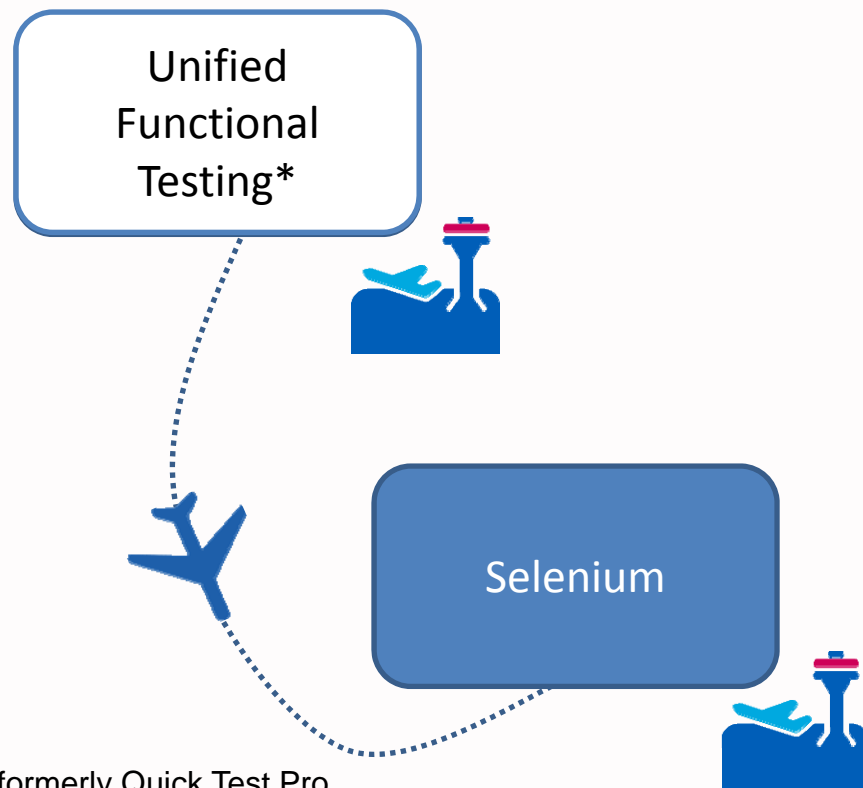


Conquering Mount System Test

- Challenges with Automated System Tests
 - Translate human verifications into code
 - Test analysis
 - Reuse code between test levels



Our journey



- Heavy, proprietary
- VB script
- Wide-spread

* formerly Quick Test Pro



[a](#) File Go To Settings Help
 SDEUX [Sign out](#)
Last login: Wednesday, 2 September 2015 09:18:26

New Booking File New Command Page New Traveller Profile

Retrieve Advanced

Amadeus Your Smart Flows

Main Page <<

Retrieve Booking File >>

Retrieve Booking File by

Last Name

First Name

Flight Number

Departure Date

Retrieve Reset

Retrieve Profile >>

Retrieve E-Ticket or EMD >>

External Content >>

Retrieve Booking File

GRP Last Name First Name Provider Dep.City Arr.City Date Rec.Loc. Pax.No.

No results to display.
Please choose one of reference number (record locator, e-ticket or FF), or enter a name and press Retrieve.

Booking File Preview

No Preview to display.

Step Name	Description	Expected Result
Step 2	<p>Click on the small arrow next to the New Booking File option.</p> <p>Click on Car icon in the dropdown list.</p>	A new Booking File is created and the Car search panel is displayed.
Step 3	Search for a Car for 1 day	Car availabilities are displayed, consistent with the search data.



File Go To Settings Help

New Booking File New Command Page New Traveller Profile

Retrieve Booking File Create new Booking File starting with...

Passenger Name

Air

Hotel

Car

Rail

New Car

LATEST INT provider 2.1 on nce... 123-26 code SWL (type HTL)

AeTM INT provider 2.1 on nce... 24-9 code GUI (type HTL)

Partner 1 - without SSO

Partner 2 - without SSO

Partner 3 - without SSO

SDEUX Sign out Last login: Wednesday, 2 September 2015 09:18:26

Amadeus Your Smart Flows

Provider Dep.City Arr.City Date Rec.Loc. Pax.No.

No results to display.

of reference number (record locator, e-ticket or FF), or enter a name and press Retrieve.

- Retrieve Profile
- Retrieve E-Ticket or EMD
- External Content

Step Name	Description	Expected Result
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File Go To Settings Help

New Booking File New Command Page New Traveller Profile

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Retrieve Booking File by name, reference, etc. Retrieve Advanced Enter GDS Commands, for example: ANLO Amadeus Your Smart Flows

Booking File 1 Owned by

Preferences Search Cars Check Reservation Go To

Select search...

Your Car Search Options

Pick-up location

City or Airport Address or Landmark Rental Station

Type name or IATA code for City/Airport :

Area: No Preference

Drop-off location

Same as pick-up Airport Rental Station

Pick-up date: 03SEP15 Thursday Time: 10:00 Days: 1

Drop-off date: 04SEP15 Friday Time: 10:00

Car provider:

[More search options](#)

Reset Search

Go to command page

Integrated Partners

Overview

Quality Monitor

No segments booked



Search for a Car for 1 day

Step Name	Description	Expected Result
Step 2	Click on the small arrow next to the New Booking File option. Click on Car icon in the dropdown list.	A new Booking File is created and the Car search panel is displayed.
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New Booking File New Command Page New Traveller Profile

Retrieve Booking File by name, reference, etc. Retrieve Advanced
 Enter GDS Commands, for example: ANLO Amadeus Your Smart Flows

Booking File 1 Owned by X

Preferences Search Cars Checkout Reservation Go To

Select search... ▼

Your Car Search Options

Pick-up location

City or Airport
 Address or Landmark
 Rental Station

Type name or IATA code for City/Airport : Area:

Nice (NCE) France
Nice, Cote D'Azur (NCE) France

Same as pick-up
 Airport
 Rental Station

Pick-up date: Thursday Time: Days:
 Drop-off date: Friday Time:
 Car provider:

[More search options](#)

Reset Search

Go to command page

Integrated Partners

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No segments booked

Step Name	Description	Expected Result
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[a](#) File Go To Settings Help

[New Booking File](#) [New Command Page](#) [New Traveller Profile](#)

Last login: Wednesday, 2 September 2015 09:18:26 SDEUX Sign out

Retrieve Booking File by name, reference, etc. [Retrieve](#) [Advanced](#) Enter GDS Commands, for example: ANLO [Amadeus](#) Your Smart Flows

Booking File 1 Owned by

[Preferences](#) **Search** [Cars](#) [Checkout](#) [Reservation](#) [Go To](#)

Select search...

Your Car Search Options

Pick-up location

City or Airport Address or Landmark Rental Station

Type name or IATA code for City/Airport : Area:

Drop-off location

Same as pick-up Airport Rental Station

Pick-up date: Thursday Time: Days:

Drop-off date: Friday Time:

Car provider:

[More search options](#)

[Reset](#) [Search](#)

Go to command page

[Intered Partners](#) [Overview](#)

City Monitor

No segments booked

Step Name	Description	Expected Result
Step 2	Click on the small arrow next to the New Booking File option. Click on Car icon in the dropdown list.	A new Booking File is created and the Car search panel is displayed.
Step 3	Search for a Car for 1 day	Car availabilities are displayed, consistent with the search data.



[a](#) File Go To Settings Help
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Last login: Wednesday, 2 September 2015 09:18:26

[New Booking File](#) [New Command Page](#) [New Traveller Profile](#)

[Retrieve](#) [Advanced](#)

[Amadeus](#) [Your Smart Flows](#)

Booking File 1 Owned by

[Preferences](#)
Search
Cars
Checkout
Reservation
[Go To](#)

[Your Search](#)

Results found for: Nice (NCE) , 03 Sep 2015, 10:00 - 04 Sep 2015, 10:00

2 stations found. [View details](#) Search completed

[Listing view](#)
Category view
Map view

Group rates by: [Car rental station](#) | [No grouping](#) Sort Rates by: [Price](#) [Proximity](#) [Mileage](#)

A FIAT 500 or similar (MCMR)

Hertz 4 2

Category: Mini
Type: 2-4 Door
Mileage: 250 km (0.34 EUR/ extra km)
Codes: RC-WEBWFR

64.97 EUR
Prepaid
64.97 EUR per day

[Conditions](#)

Book

Pick up and drop off: 9 Avenue Gustave V, 06000 Nice - City center

PEUGEOT 107 or similar (MBMR)

[Go to command page](#)

Integrated Partners

Overview

Quality Monitor

No segments booked

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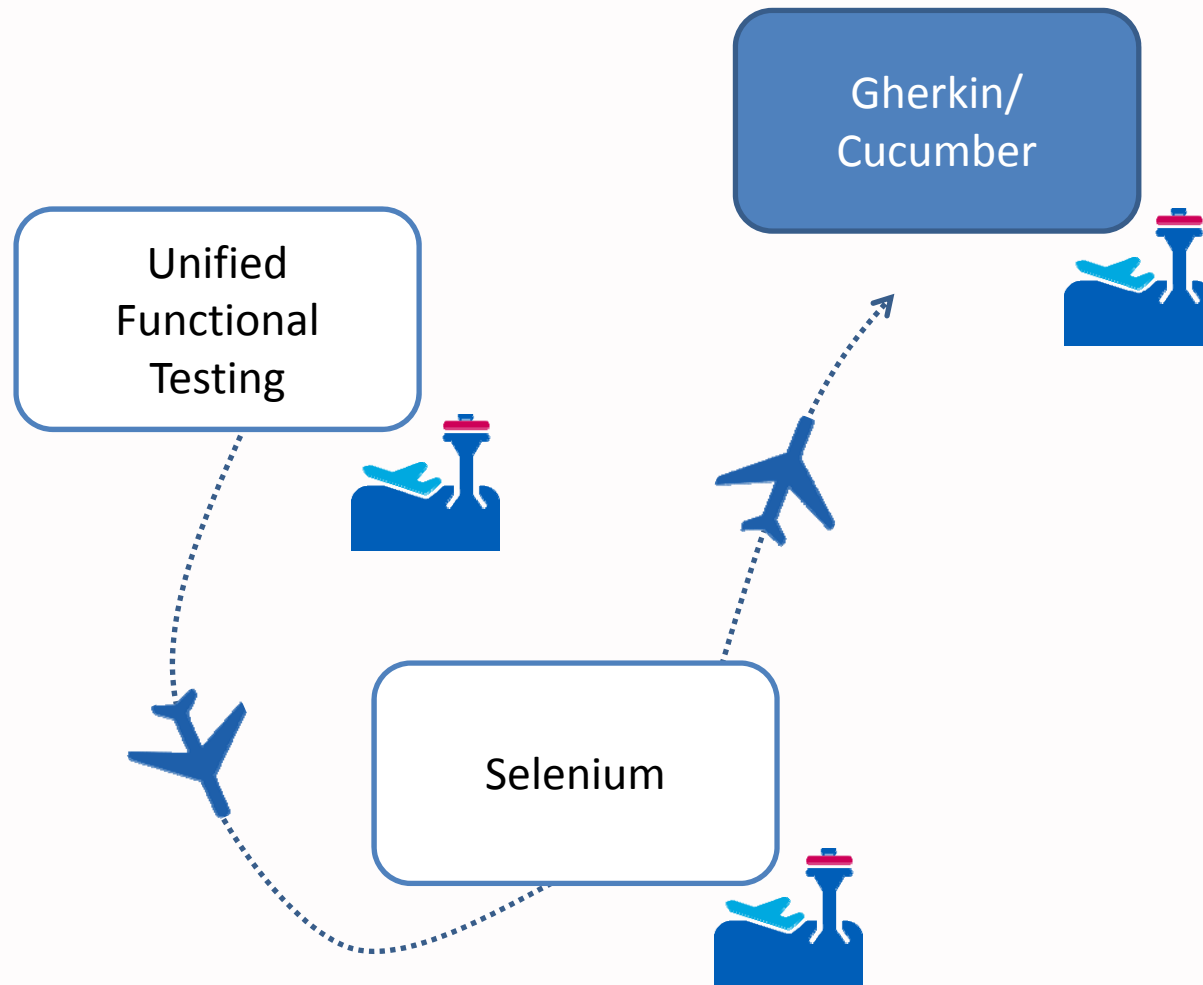
Selenium code snippet

```
mainPage = HelperLogin.loginWith(loginParams);  
reporter.reportPassed("1. User logged in successfully", "");  
PageCarSearch carPage = mainPage.selectCarBookingFile();  
reporter.reportPassed("2. Open a booking file car", "");  
PageCheckout pageCheckOut =  
    carPage.actionCarSearchByCA(strPickUpPoint);
```


Selenium printout – home-grown

Waiting for Element
Main Page loaded
Wait
iSession ID
1. User Logged in successfully
Input element is displayed
Wait
CAR Booking File
Booking file Tab display check
PAGE::
CAR FRAME displayed check
CAR Search page display check
2. Open a booking file car
Input element By.id: searchSection_btn_search_id is displayed
Click on search button
Search waiting
Error Message display validation

- Difficult to analyze
- Not reviewable by functional people



Introduction to Cucumber

Scenario: Add two numbers

Given I have entered 50 into the calculator

And I have entered 70 into the calculator

When I press add

Then I type 50 in the input field

Five is entered, then zero

Given /I have entered (.*) into the calculator/ do |n|

calculator = Calculator.new

calculator.push(n.to_i)

end

Source: <https://cucumber.io/>



Cucumber – Criticism

“Reading and writing Gherkin is a waste of time [for non-technical stakeholders].”

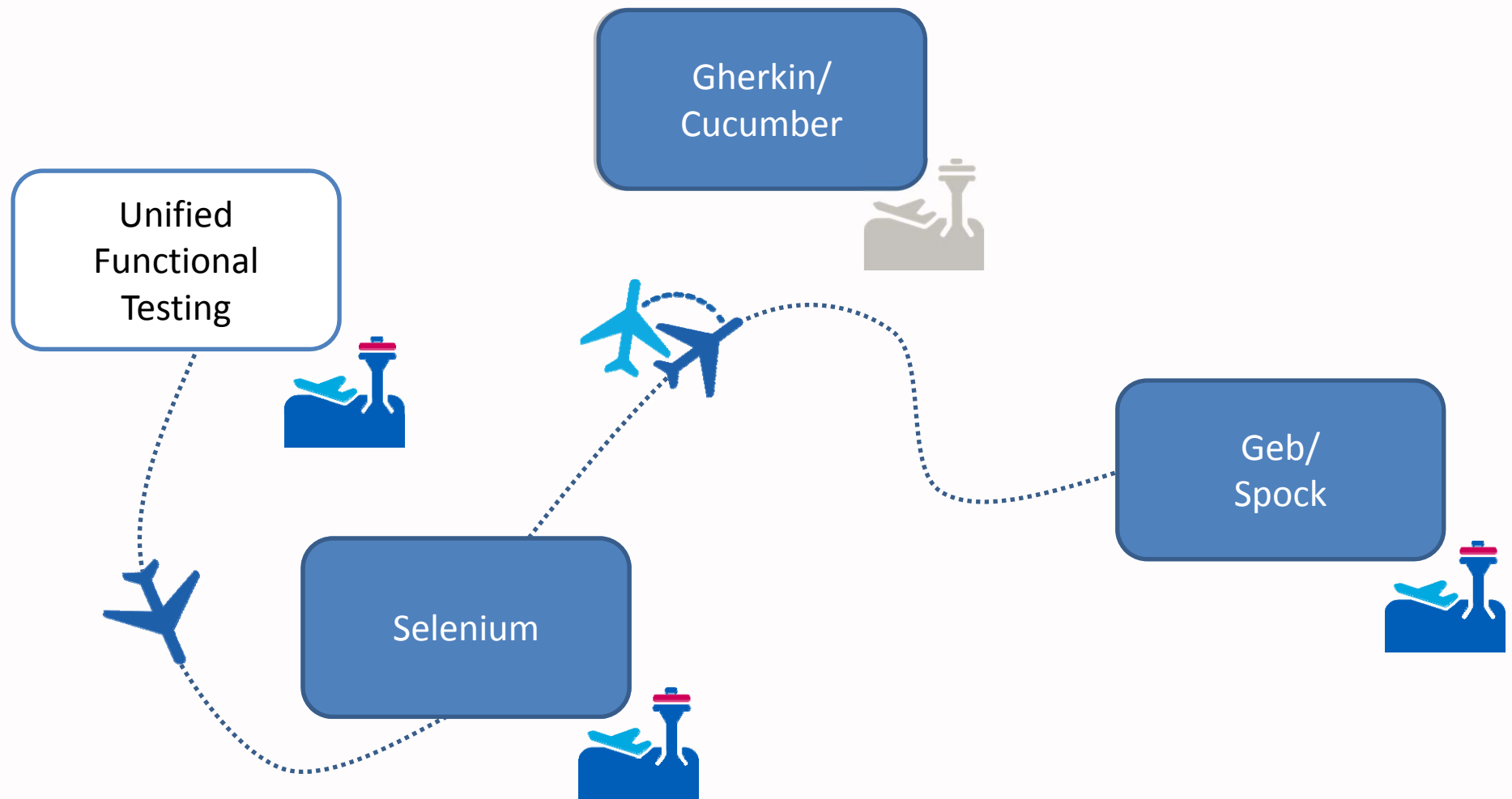
“The more naturally it reads, the more difficult it is to translate it into reusable code.”

“All the reasons to use it ... are theoretical, and I have never seen them ... be remotely applicable in the real world.”

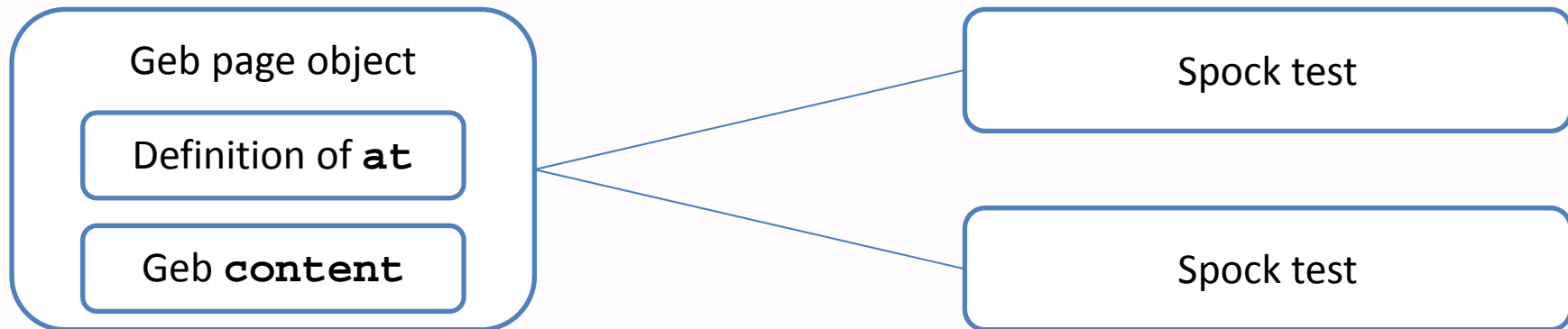
Source: <http://www.jimmycuadra.com/posts/please-don-t-use-cucumber>



Geb/Spock



Introduction to Geb/Spock



```
public class CarSearchPage extends AbstractPage {  
    static at = {  
        carFrame.display given: 'The user is on Car Search Page'  
    }  
    static content = {  
        cityInput { $( "#? " }  
        pickupDateInput { }  
    }  
    at CarSearchPage  
    when: 'Search for a car for 1 day'  
        cityInput = DataBible.PICKUP_CITY  
        searchButton.click()  
    then: 'The user is on the Car Availabilities page'  
        at CarAvailPage  
    and: 'New Record Locator number is displayed'
```




Introduction to Geb/Spock

```
given: 'The user is on Car Search Page'  
when: 'Search for a car for 1 day'  
  
then: 'The user is on the Car Availabilities page'  
and: 'New Record Locator number is displayed'
```

Spock printout – Damage Control

```
messageModule.successMessage.text() == successMessage
|                                     | |
null                                | 2 stations were found.
|                                     |
false
```

Picking up speed



- Large scale usage of Geb/Spock
 - End-to-end system tests
 - Inherited from manual QA
- 6 months
 - 100 tests
 - 180 Geb pages/modules



Reusable code

- Shared framework → Synergy
- Responsibility distribution → UI + Geb pages aligned

Bumps in the road

- Unstable SUT

Step 3	Search for a Car for 1 day
--------	----------------------------

- Inherited scenarios
- Headless vs normal browser



Sailing without wind



- Limitations in Geb/Spock
 - Standalone application
 - Compatibility with old IE
 - Technical problems

The journey continues

Specification	Features	Failures	Skipped	Duration	Result
amadeus.geb.aetm.test.anr.sanity.CarBooking_Spec	1	1	0	1,087.037s	failed

- Atomization
- Existing fl

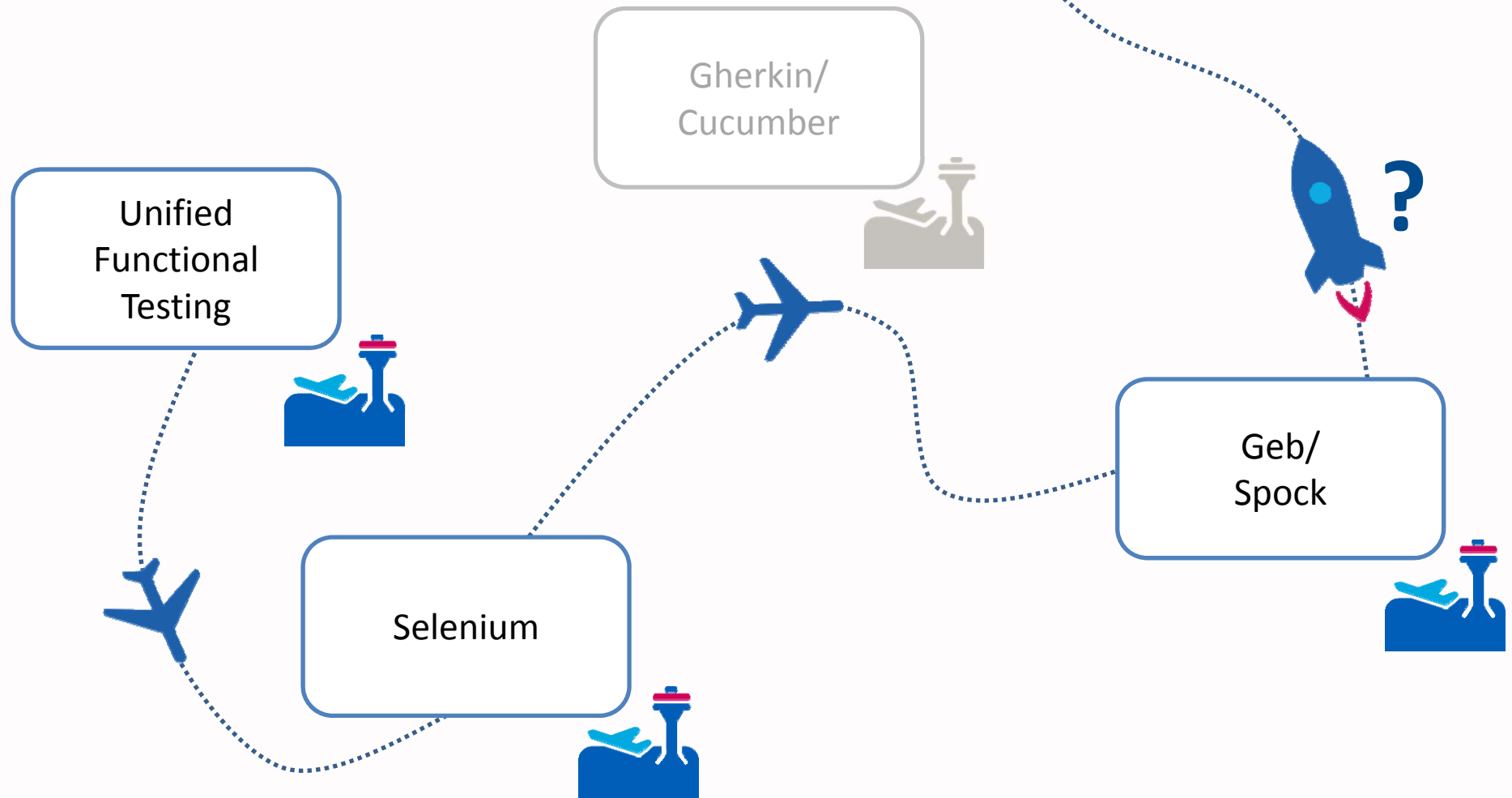
Specification	Features	Failures	Skipped	Duration	Result
amadeus.geb.aetm.test.anr.sanity.CarBooking_Spec	1	1	0	1,087.037s	failed
amadeus.geb.aetm.test.anr.sanity.CarSearch_Spec	1	0	0	107.950s	passed


```

38 def setupSpec() {
39     toolbarModule.newBfSelectorButton.click()
40     toolbarModule.newBookingFileCarItem.click()
41     at CarSearchPage
42     cityInput = DataBible.FROM_CITY_IATA_CODE
43     pickUpDateInput = DataBible.FROM_DATE
44     dropOffDateInput = DataBible.TO_DATE
45     searchButton.click()
46     at CarAvailPage
47 }
    
```



Navigare necesse est



Why choose Geb/Spock?



- ✓ Easy to analyse
- ✓ Plain English
- ✓ Reusable code

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