

- Building a globalized,  
customer facing e-commerce product,  
powered by micro-services





Hello!

# We are team e-Travel

We are here to share what 10 years of trying  
to go global has taught us



# Tasos Latsas

@tlatsas

1+ years in e-Travel:

- ~1 year doing ruby/web development
- ~2 years doing python/web development
- ~6 years doing random stuff with linux systems/services/distros



# Nikos Dimitrakopoulos

@nikosd

6 years in e-Travel & Fraudpointer:

- ~1 year C#/web development
- ~4 years ruby/web development
- For the last year “disarmed” from coding, leading the Product team

*Ruby fanboy since 2004 :)*



- Outline

- 1. Timeline: Challenges + Solutions over time
  2. Biggest mistakes
  3. What's next



LONG TIME AGO...  
(that few know of, or remember)

- Long time ago... (2004 - 2008)

- There was a simple ASP.Net site...
  - That at some point became two sites
  - With multiple brandings and multiple languages

- Long time ago... (2004 - 2008)
  - But they were actually different sites
    - Using the same codebase
    - But different deployments

- Long time ago... (2004 - 2008)
- Each site was hardwired to a specific branding, language and “market”

- Long time ago... (2004 - 2008)

- For example pamediakopes.gr
  - Was in Greek
  - With “pamediakopes.gr” branding
  - And was targeted to the Greek and Cyprus markets

- Long time ago... (2004 - 2008)

- For example pamediakopes.gr
  - Was in Greek
  - With “pamediakopes.gr” branding
  - And was targeted to the Greek and Cyprus markets
- And fantasticgreece.com/de
  - Was in German
  - With “fantasticgreece.com” branding
  - And was targeted to the German market



Medieval ages (2008 - 2011)

(that some have heard about but few remember)



- Medieval ages (2008 - 2011)



- First wave of new markets

- Medieval ages (2008 - 2011)

- Translations automation & management

- Scripts & tools for extraction of keys (Gettext)
- Standardized po files (Gettext) as translation dictionaries
- **Transifex** to the rescue as a management platform!

- Medieval ages (2008 - 2011)
  - Each new market was a major project (**year+**)
    - Either as a new sub-site (for example “airtickets24.com/**ru**”)
    - Or as a brand new, stand-alone domain (for example trip.ru)

- Medieval ages (2008 - 2011)
  - I10n and i18n still an afterthought and mostly just translations

- Medieval ages (2008 - 2011)

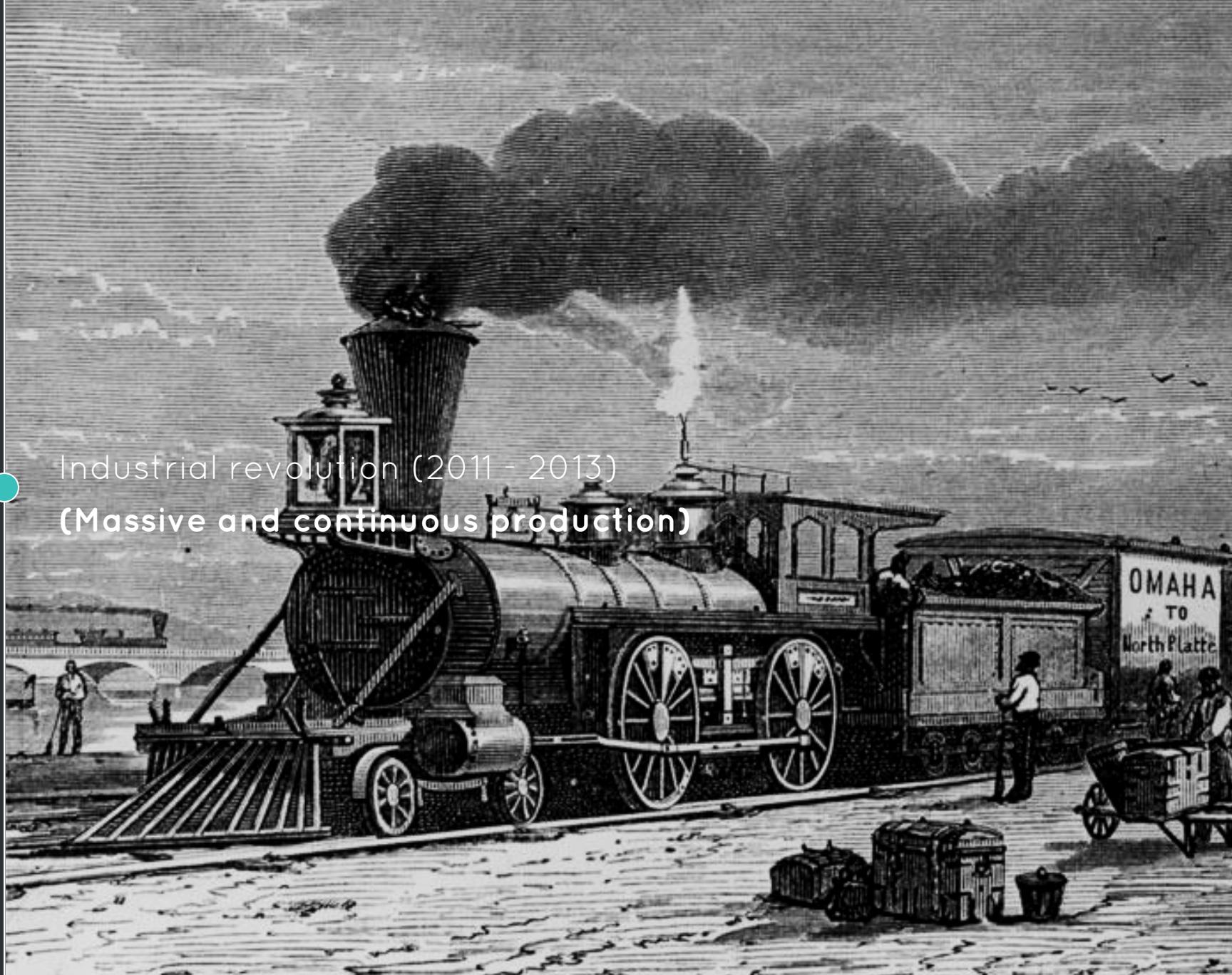
- At the same time complexity exploded

- New products
- Smarter products
- More features
- New platforms
- First “APIs”

- Medieval ages (2008 - 2011)

- Almost everything in big fat “solutions”

- Business logic
  - Presentation
  - Persistence
  - i18n
  - ...



Industrial revolution (2011 - 2013)

(Massive and continuous production)

- Industrial revolution (2008 - 2011)
- Jumping into the micro-services wagon  
(before the term even existed - we called it then “SOA” without the fluff)



● Industrial revolution (2008 - 2011)

- Break pieces into REST services
- Build robust and modern client front-ends
- Ruby + Rails come into play

- Industrial revolution (2008 - 2011)

- We started building a Rails app as the web front-end with:

- Modern web practices
- Horizontal scalability
- Automated & smooth deployment
- Extensive test suite
- **i18n built-in**

рубин

ମାଣିକ

ルビー

يافوت



紅寶石

ମାଣିକ

Ruby + i18n



- Industrial revolution (2008 - 2011)

- **i18n built-in:** whack a mole

- rudimentary support from rails for full blown gettext (plurals, interpolations, keys extraction, po backend)

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- **i18n built-in:** whack a mole

- rudimentary support from rails for full blown gettext (plurals, interpolations, keys extraction, po backend)
- again, rudimentary support time formats (15 Ιανουάριος)
- fallbacks working only as proof of concept (:de\_DE -> :de -> :en)

- Industrial revolution (2008 - 2011)

- **i18n built-in:** number\_to\_currency

- Is sloooooooooow
- Makes bad assumptions
  - currency is determined based on locale
  - reaaaally?

## ● Industrial revolution (2008 - 2011)

```
[1] pry(main)> i = 100.10
=> 100.1
[2] pry(main)> Benchmark.bmbm do |x|
[2] pry(main)*  x.report('printf') { 1000.times { '%.2f' % i } }
[2] pry(main)*  x.report('number_to_currency') { 1000.times { helper.number_to_currency(i) }
}
[2] pry(main)* end
```

Rehearsal -----

```
printf          0.000000  0.000000  0.000000 ( 0.004235)
number_to_currency 1.370000  0.070000  1.440000 ( 1.492025)
----- total: 1.440000sec
```

|                    | user     | system   | total    | real        |
|--------------------|----------|----------|----------|-------------|
| printf             | 0.000000 | 0.000000 | 0.000000 | ( 0.001912) |
| number_to_currency | 0.150000 | 0.000000 | 0.150000 | ( 0.149475) |

- Industrial revolution (2008 - 2011)

- **i18n built-in:** performance/memory issues
  - **4s** to read the po files in memory (!) for “just” 8 languages

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- Industrial revolution (2008 - 2011)

- **i18n built-in:** performance/memory issues

- **4s** to read the po files in memory (!) for “just” 8 languages
- Solution: “compile” them to ruby code (!)
  - < **1s** to load on startup
  - but bloating the memory (> **40mb** / process)

## ● Industrial revolution (2008 - 2011)

**i18n built-in:** mighty “language selector” file

- **1.151** lines of case-d ruby code



Web + i18n



- Industrial revolution (2008 - 2011)



## **javascript**

- autocomplete
- latinize
- upcase
- strip “invalid” characters

- Industrial revolution (2008 - 2011)



## UI/UX

- different languages → different space requirements on the screen
- different font requirements (e.g. arabic, thai)
- different font size requirements
- RTL (lol good luck)



# Translations

- Industrial revolution (2008 - 2011)

- Translations management
  - still <3 **transifex**
  - still <3 Gettext parser

- Industrial revolution (2008 - 2011)
- Translations management
  - still <3 **transifex**
  - still <3 Gettext parser
  - (**new**) homebrewed bunch of scripts syncing with transifex and committing to repo

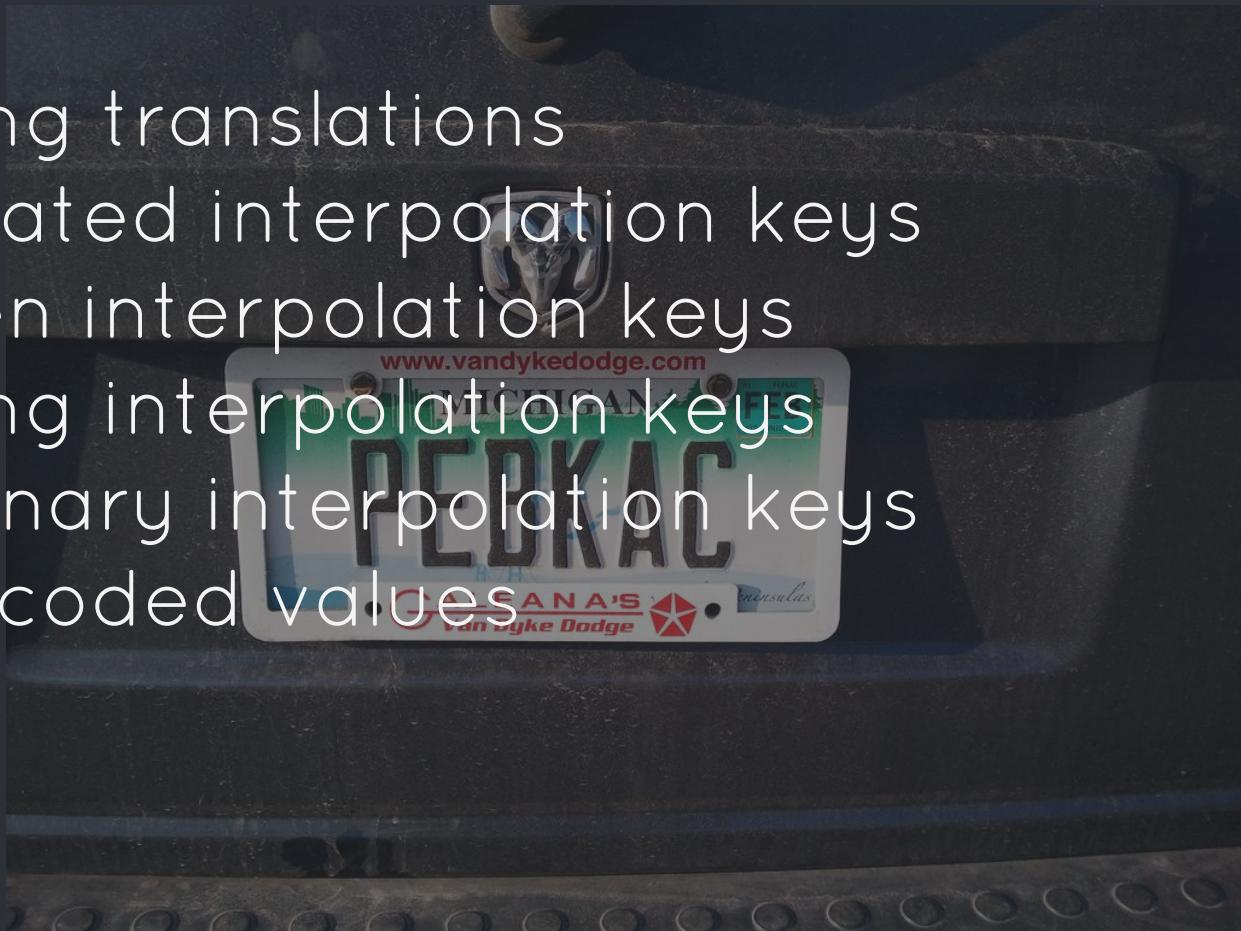
- Industrial revolution (2008 - 2011)
- But, translations are managed by humans...



- Industrial revolution (2008 - 2011)

- But, translations are managed by humans...

- missing translations
- translated interpolation keys
- broken interpolation keys
- missing interpolation keys
- imaginary interpolation keys
- hard-coded values



- Industrial revolution (2008 - 2011)

- 1st take of automated QA for translations:

→ smoke tests

- ... a lot of them ...
- ... **3 hours to run** ...
- but saved a lot of releases

- Industrial revolution (2008 - 2011)
  - Apart from the main Rails Web app, we started building another big Rails app as the CRM back-end

- Industrial revolution (2008 - 2011)
  - And a whole zoo of standalone services serving content & business logic in the middle

- Industrial revolution (2008 - 2011)
- During this time the second (bigger) wave of new markets came along

- Industrial revolution (2008 - 2011)
- Launching a new market was still a major project
  - ~ definitely less than a year
  - ~ much more streamlined
  - ~ 2 new markets per year

but still a **big** and **dodgy** project



Why?

- Industrial revolution (2008 - 2011)

- Logic was still hard-coded
- Macro complexity has increased even though micro complexity had decreased
- Sync different teams, with different codebases, different apps, even different technologies



TODAY

(2015 - and still no hoverboards)



Today



Went from to 12 “markets” to...



# **54 Countries**

(Actively managed, most with local phone numbers, etc)

# **38 Languages**

(With at least 90% completeness)

# **33 Currencies**

(All payable)



Today



in  
8  
months



**~ 1,800,000 users**

(per month)



**from 234 countries**

(Including names like “*Djibouti*”, “*Belize*”, etc)



**with 400 locales**

(“el-GR”, “ru”, “en-US”, etc)



## **7+ different “platforms”**

(Web, iOS, Android, SMS, emails, telephone,  
push notifications, more to come?)

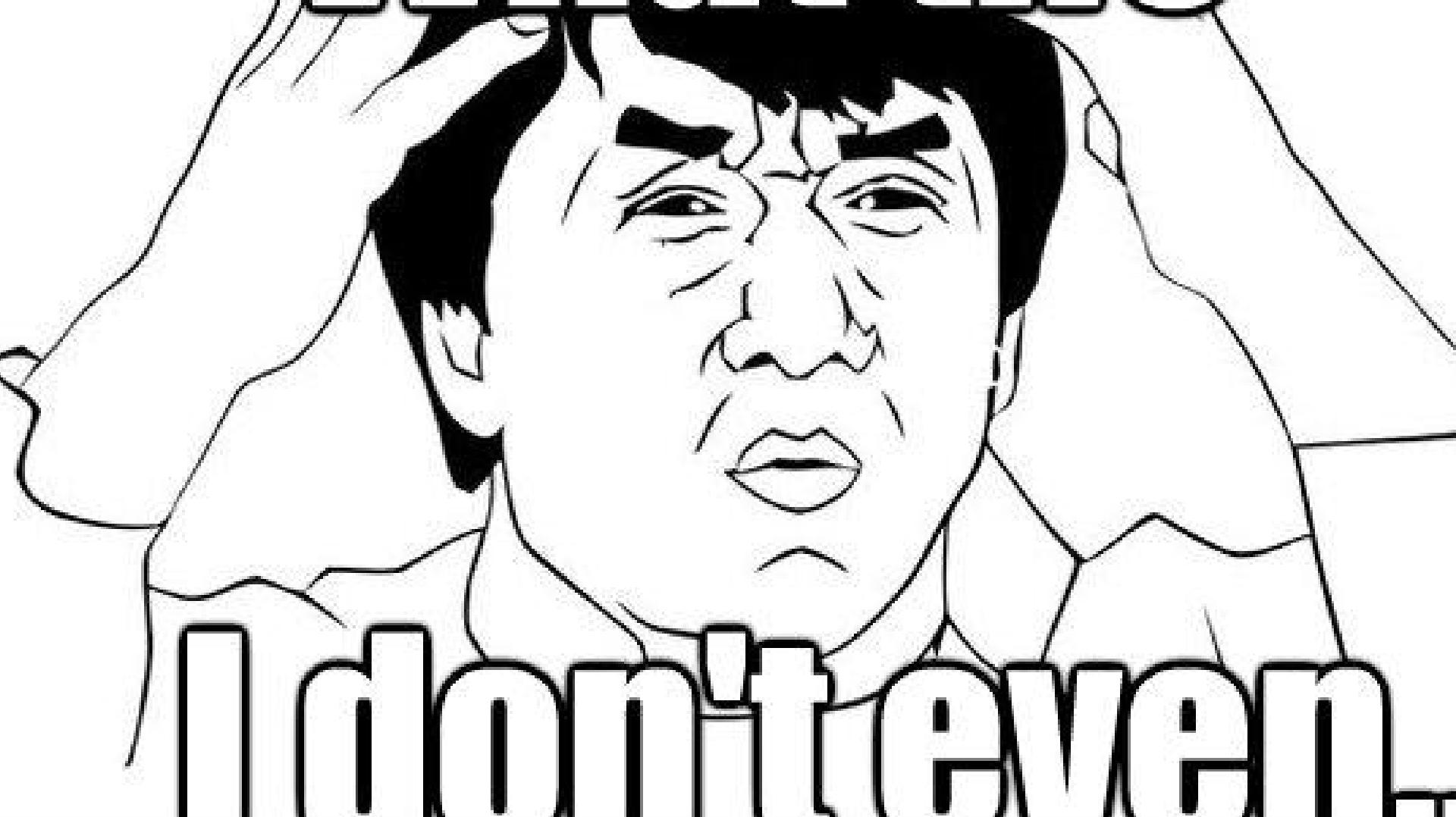
## **Tens of services**

(running on C# and Ruby)

## **40+ releases / week**

(0 downtime... *mostly*)

**What the**





## Time To Go Live



- Company level time to go live: **~ 4 weeks**
  - translations
  - configurations
  - release
- Dev level time to go live: **couple of days**



Our approach



One codebase (*per app*) supporting  
different configurations

**vs**

multiple different deployments

# Our approach

mytrip.com

FLIGHTS HOTELS CARS

Search Flights

From: Moscow, All airports (MOW) To: Elat, Ovda (VDA)

Best offers for flights from Athens in the coming days

|                                  |                                  |
|----------------------------------|----------------------------------|
| Chania                           | Milan (MXP)                      |
| Mon 25 May for 2 days            | Mon 1 Jun for 5 days             |
| AEGEAN<br>A STAR ALLIANCE MEMBER | AEGEAN<br>A STAR ALLIANCE MEMBER |
| From 71,64 €                     | From 109,42 €                    |

pamediakopes.gr

ΠΤΗΣΕΙΣ ΞΕΝΟΔΟΧΙΑ ΑΚΤΟΠΛΟΙΚΑ ΑΥΤΟΚΙΝΗΤΑ

Αναζήτηση Πτήσεων

Από: Αθήνα, Ελευθέριος Βενιζέλος (ATH) Προς: Θερα, Σαντορίνη (JTR)

trip.ae

+44 8447747881

จองตั๋วเครื่องบิน โรงแรม รถเช่า ร้านค้า

Dubai (DXB) Moscow (MOW) 24/04 - 24/04 1 ผู้ใหญ่ ค้นหา

ข้อเสนอที่ยอดเยี่ยมในสเปนจาก จูบ

|   |  |   |  |
|---|--|---|--|
| นาเดรน 27 เม.ย. ล่าสุด 7 วัน<br>GULF AIR จากราคา 459,13 € | โตชา 3 มิ.ย. ล่าสุด 5 วัน<br>flydubai จากราคา 720,52 € | ลอนดอน (LHR) 20 พ.ค. ล่าสุด 5 วัน<br>QATAR AIRWAYS จากราคา 2,007,63 € | 瓦拉几亞 3 ม.ค. ล่าสุด 15 วัน<br>Ukraine International Airlines จากราคา 2,051,86 € |
|---|--|---|--|

φθηνότερες πτήσεις για τις επόμενες εβδομάδες από Αθήνα

|   |   |  |  |
|---|---|--|--|
| Σκύρος Παρ 24 Απρ. για 12 ημέρες<br>AEGEAN<br>A STAR ALLIANCE MEMBER<br>Από 48,03 € | Πράγα Τρι 20 Οκτ. για 15 ημέρες<br>AEGEAN<br>A STAR ALLIANCE MEMBER<br>Από 100,72 € | Βουκουρέστι (OTP) Παρ 22 Μαΐ. για 2 ημέρες<br>AEGEAN<br>A STAR ALLIANCE MEMBER<br>Από 107,47 € | Άμστερντα� Τρι 21 Ιούλ. για 28 ημέρες<br>AIRFRANCE<br>A STAR ALLIANCE MEMBER<br>Από 154,24 € |
|---|---|--|--|

- Our approach
- Make these configurations dynamic (**at runtime**) and **not** statically configured (in files or code)



Our approach



Introduce a new (configuration) service



Our approach



- Introduce a new (configuration) service
  - Share configurations to multiple services



Our approach



Introduce a new (configuration) service

- Share configurations to multiple services
- Separate deploy schedules



## Our approach



### Introduce a new (configuration) service

- Share configurations to multiple services
- Separate deploy schedules
- Centralized configuration logic



## Our approach



Introduce a new (configuration) service

- Share configurations to multiple services
- Separate deploy schedules
- Centralized configuration logic
- RIP mighty “language selector” xD

- Configuration service

- Built with ruby
- Nginx + AWS S3
- Keep It Simple, Stupid™
  - Read json files
  - Process
  - Permute
  - Output json configuration(s)
  - Upload to Amazon S3 bucket (easy deployment + free .9999 reliability)

- Configuration service clients
  - Query the service for settings using **any** brand/country/language **combination**

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  - Get all available info for the combination they asked for



## Configuration service clients



- Query the service for settings using **any** brand/country/language **combination**
- Clients **do not care** and do not make assumptions (*when you **assume** you make an **ass** out of **u** and **me***)
- Get all available info for the combination they asked for
- Can get extra info on demand (e.g. validation rules, legacy market mappings)

- Configuration service challenges

- Micro-services → update tenths of applications to read from configuration service (code + tests + deploy)

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- Micro-services → update tenths of applications to read from configuration service (code + tests + deploy)
- Legacy systems
- Caching / performance / availability
- Some of your data becomes irrelevant → migration tasks

- Currencies!

- UX (and not only) sophistication for currencies
  - symbols
  - delimiters
  - precisions (!!!!!)
  - roundings (!!!!!!!!!!!)

- Streamlined translation process
  - special screen with upcoming translations
    - + per git branch
- = better co-op with translation teams

- Turbo-charged automated QA for translations

- 2nd take of automated QA for translations:

→ translations checker:

- homebrewed build scripts that check for
  - errors (missing/wrong interpolations)
  - warnings (duplicate keys/lines/interpolations etc)
- run in CI after each commit
- run **in seconds**
- have paid off again and again and again

## Turbo-charged automated QA for translations

```
[vkalligas@ITDEVELOP03-UBUNTUNEW ~/Projects/LeWeb/leweb (ruby-2.1.3@leweb) (master)] bundle exec rake i18n:translations:app:check_errors
##teamcity[blockOpened name='Translations for af']
##teamcity[blockClosed name='Translations for af']
##teamcity[blockOpened name='Translations for bg']
##teamcity[blockClosed name='Translations for bg']
##teamcity[blockOpened name='Translations for cs']
##teamcity[blockClosed name='Translations for cs']
##teamcity[blockOpened name='Translations for da']
##teamcity[blockClosed name='Translations for da']
##teamcity[blockOpened name='Translations for de']
##teamcity[blockClosed name='Translations for de']
##teamcity[blockOpened name='Translations for el']
##teamcity[blockClosed name='Translations for el']
##teamcity[blockOpened name='Translations for en']
##teamcity[blockClosed name='Translations for en']
##teamcity[blockOpened name='Translations for es']
##teamcity[blockClosed name='Translations for es']
##teamcity[blockOpened name='Translations for et']
##teamcity[blockClosed name='Translations for et']
##teamcity[blockOpened name='Translations for fi']
##teamcity[blockClosed name='Translations for fi']
##teamcity[blockOpened name='Translations for fr']
##teamcity[blockClosed name='Translations for fr']
##teamcity[blockOpened name='Translations for hi']
##teamcity[blockClosed name='Translations for hi']
##teamcity[blockOpened name='Translations for hr']
##teamcity[blockClosed name='Translations for hr']
##teamcity[blockOpened name='Translations for hu']
##teamcity[blockClosed name='Translations for hu']
##teamcity[blockOpened name='Translations for id']
##teamcity[blockClosed name='Translations for id']
##teamcity[blockOpened name='Translations for it']
##teamcity[blockClosed name='Translations for it']
##teamcity[blockOpened name='Translations for ja']
##teamcity[blockClosed name='Translations for ja']
##teamcity[blockOpened name='Translations for kk']
##teamcity[blockClosed name='Translations for kk']
##teamcity[blockOpened name='Translations for ko']
##teamcity[blockClosed name='Translations for ko']
##teamcity[blockOpened name='Translations for lt']
##teamcity[blockClosed name='Translations for lt']
##teamcity[blockOpened name='Translations for lv']
##teamcity[blockClosed name='Translations for lv']
##teamcity[blockOpened name='Translations for ms']
##teamcity[blockClosed name='Translations for ms']
##teamcity[blockOpened name='Translations for nl']
##teamcity[blockClosed name='Translations for nl']
##teamcity[blockOpened name='Translations for no']
##teamcity[blockClosed name='Translations for no']
##teamcity[blockOpened name='Translations for pl']
##teamcity[blockClosed name='Translations for pl']
##teamcity[blockOpened name='Translations for pt']
##teamcity[blockClosed name='Translations for pt']
##teamcity[blockOpened name='Translations for ro']
```

```
[vkalligas@ITDEVELOP03-UBUNTUNEW ~/Projects/Leweb/leweb (ruby-2.1.3@leweb) (master)] bundle exec rake i18n:translations:app:check_warnings
##teamcity[blockOpened name='Translations for af']
##teamcity[message text='%brand_name?'] - Value is the same with key' status='WARNING'
##teamcity[message text='%departure_date - %return_date'] - Value is the same with key' status='WARNING'
##teamcity[message text='%departure_date - ...'] - Value is the same with key' status='WARNING'
##teamcity[message text='%{routes_list} sluit bagasie in RNING'] - Duplicate translation for keys: %{routes_list} include baggage, %{routes_list} includes baggage' status='WARNING'
##teamcity[message text='%{routes_list} sluit bagasie in RNING'] - Duplicate translation for keys: %{routes_list} include baggage, %{routes_list} includes baggage' status='WARNING'
##teamcity[message text='&times; %{number}'] - Value is the same with key' status='WARNING'
##teamcity[message text='50%'] - Value is the same with key' status='WARNING'
##teamcity[message text='A file'] - Value has too many consecutive whitespaces: "A-Лер " status='WARNING'
##teamcity[message text='Adres'] - Duplicate translation for keys: Address, addressComplete, fullAddress' status='WARNING'
##teamcity[message text='Volwassene'] - Duplicate translation for keys: Adult, adult' status='WARNING'
##teamcity[message text='Afrikaans'] - Value is the same with key' status='WARNING'
##teamcity[message text='Agent'] - Value is the same with key' status='WARNING'
##teamcity[message text='Lugversorging'] - Duplicate translation for keys: Air Condition, Air conditioning' status='WARNING'
##teamcity[message text='Lugversorging'] - Duplicate translation for keys: Air Condition, Air conditioning' status='WARNING'
##teamcity[message text='Jy is slegs geregting op een Gratis handbagasie (12kg) en 'n skootre...'] - Duplicate translation for keys: AirFranceLuggageExtraCost, KLMLuggageExtraCost' status='WARNING'
##teamcity[message text='Lughawe'] - Duplicate translation for keys: Airport, airport' status='WARNING'
##teamcity[message text='Airport shuttle'] - Value has too many consecutive whitespaces: "Lughawependeltuig " status='WARNING'
##teamcity[message text='American Express'] - Value is the same with key' status='WARNING'
##teamcity[message text='Android'] - Value is the same with key' status='WARNING'
##teamcity[message text='BIC'] - Value is the same with key' status='WARNING'
##teamcity[message text='Bagasie'] - Duplicate translation for keys: Baggage, Baggages' status='WARNING'
##teamcity[message text='Bagasie'] - Duplicate translation for keys: Baggage, Baggages' status='WARNING'
##teamcity[message text='Banca Romaneasca'] - Value is the same with key' status='WARNING'
##teamcity[message text='Bancpost'] - Value is the same with key' status='WARNING'
##teamcity[message text='Bird'] - Value has too many consecutive whitespaces: "voël " status='WARNING'
##teamcity[message text='Blind'] - Value is the same with key' status='WARNING'
##teamcity[message text='Besprekingskode'] - Duplicate translation for keys: Booking code, Reservation code' status='WARNING'
##teamcity[message text='BookingFailed'] - Value has too many consecutive whitespaces: "'n Besprekingsfout het voorgekom " status='WARNING'
##teamcity[message text='Botswana Pula'] - Value is the same with key' status='WARNING'
##teamcity[message text='Verspreide wolke'] - Duplicate translation for keys: Broken clouds, scattered clouds' status='WARNING'
##teamcity[message text='Bus'] - Value is the same with key' status='WARNING'
##teamcity[message text='Koop'] - Duplicate translation for keys: Buy, Purchase' status='WARNING'
##teamcity[message text='By cash in any salon of Euroset or Svyaznoy in Russia, with payment...'] - Value has too many consecutive whitespaces: "Jy kan kontant vir jou bespreking betaal in enige van die klei nhandeswinkels van Euroset of Svyaznoy in Rusland deur jou Identiteitsdokument en die volgende" status='WARNING'
##teamcity[message text='CCV2'] - Value is the same with key' status='WARNING'
##teamcity[message text='Kansellasierbeleid'] - Duplicate translation for keys: Cancellation Policy, Cancellation policy' status='WARNING'
##teamcity[message text='Kansellasierbeleid'] - Duplicate translation for keys: Cancellation Policy, Cancellation policy' status='WARNING'
##teamcity[message text='Kaartnummer'] - Duplicate translation for keys: Card number, CardNumber' status='WARNING'
##teamcity[message text='Kaarttype'] - Duplicate translation for keys: Card type, Cardtype' status='WARNING'
##teamcity[message text='Kaartnummer'] - Duplicate translation for keys: Card number, CardNumber' status='WARNING'
##teamcity[message text='Kaarttype'] - Duplicate translation for keys: Card type, Cardtype' status='WARNING'
##teamcity[message text='Stad'] - Duplicate translation for keys: City, city' status='WARNING'
##teamcity[message text='Kontakinliting'] - Duplicate translation for keys: Contact information, contactInformation' status='WARNING'
##teamcity[message text='Land'] - Duplicate translation for keys: Country, country' status='WARNING'
##teamcity[message text='Croatian'] - Value has too many consecutive whitespaces: "Kroatië " status='WARNING'
##teamcity[message text='Czech'] - Value has too many consecutive whitespaces: "Tsjeë " status='WARNING'
##teamcity[message text='Wagwoord vergeet?'] - Duplicate translation for keys: Did you forget your password?, Forgot your password?' status='WARNING'
##teamcity[message text='Diesel'] - Value is the same with key' status='WARNING'
##teamcity[message text='Aflaat'] - Duplicate translation for keys: Download, Drop off' status='WARNING'
```

# Turbo-charged automated QA for translations

Overview Changes 1 Build Log Parameters Artifacts PerfMon

Tree view | Tail

View: All messages ▾

```
[16:45:28] Skip checking for changes - changes are already collected
[16:45:28] + Publishing internal artifacts
[16:45:28] Clearing temporary directory: /home/teamcity/buildAgent/temp/buildTmp
[16:45:28] Checkout directory: /home/teamcity/buildAgent/work/88dfd15f7a69dc92
[16:45:28] + Updating sources: server side checkout (25s)
[16:45:53] + Swabra
[16:45:54] + Step 1/3: Bundle Install (Command Line) (9s)
[16:46:03] + Step 2/3: Cleanup (Rake) (49s)
[16:46:53] - Step 3/3: Check translations (Rake) (31s)
[16:46:54]   Starting: /bin/sh /home/teamcity/buildAgent/temp/agentTmp/build5002362608312662468.sh
[16:46:54]   in directory: /home/teamcity/buildAgent/work/88dfd15f7a69dc92
[16:46:58]
[16:46:58] + Execute environment (1s)
[16:47:00]
[16:47:00] - Execute i18n:translations:app:check (25s)
[16:47:00]   - Translations for af
[16:47:00]     %{brand_name}?
[16:47:00]     %{departure_date} - %{return_date}
[16:47:00]     %{departure_date} - ...
[16:47:00]     %{routes_list} sluit bagasie in
[16:47:00]     %{routes_list} sluit bagasie in
[16:47:00]     &times; %{number}
[16:47:00]     50%
[16:47:00]     A file
[16:47:00]     Adres
[16:47:00]     Volwassene
[16:47:00]     Afrikaans
[16:47:00]     Agent
[16:47:00]     Lugversorging
[16:47:00]     Lugversorging
[16:47:00]     ##teamcity[message text='Jy is slegs geregtig op een Gratis handbagasie (12kg) en 'n skoot... - Duplicate translation for keys: AirFranceLuggageExtraCost, KLMLuggageExtraCost' status='WARNING']
[16:47:05]
[16:47:00]   Incorrect property name.
[16:47:00]   Valid property list format is (name( )=( )*'escaped_value'( ))* where escape symbol is "|"
[16:47:00]   Lughawe
[16:47:00]   Airport shuttle
[16:47:00]   American Express
[16:47:00]   Android
[16:47:00]   BIC:
[16:47:00]   Bagasie
[16:47:00]   Bagasie
[16:47:00]   Banca Romaneasca
[16:47:00]   Bancpost
[16:47:00]   Bird
[16:47:00]   Blind
[16:47:00]   Besprekingskode
[16:47:00]   ##teamcity[message text="BookingFailed"
[16:47:05]
[16:47:00]   Incorrect property name.
[16:47:00]   Valid property list format is (name( )=( )*'escaped_value'( ))* where escape symbol is "|"
[16:47:00]   Botswana Pula
[16:47:00]   Verspreide wolke
[16:47:00]   Bug
```

- So... we are ready  
to Go Global™  
Right?

**FOOLISH**



**MORTAL**

# Political nonsense



“

*Simferopol* is a city on the Crimean peninsula, the status of which is disputed between **Ukraine** and **Russia**. It is the administrative centre of the Autonomous Republic of Crimea or of the **Republic of Crimea**.

(from Wikipedia)

- Simferopol

- Is in Russia for Russians
- Is in Ukraine for Ukrainians
- Is “autonomous” for a lot of others



“

**Kosovo** is a **partially** recognised state in Southeastern Europe that declared its independence from Serbia in February 2008 as the Republic of Kosovo.

(from Wikipedia)

**Country\***

Select Country

kosovo



Please enter your country. We will use it as part of the billing address.

No results match  
"kosovo"

Information about promotions, news, contests, etc.

We do not share, exchange or sell your email address to third parties. You can als

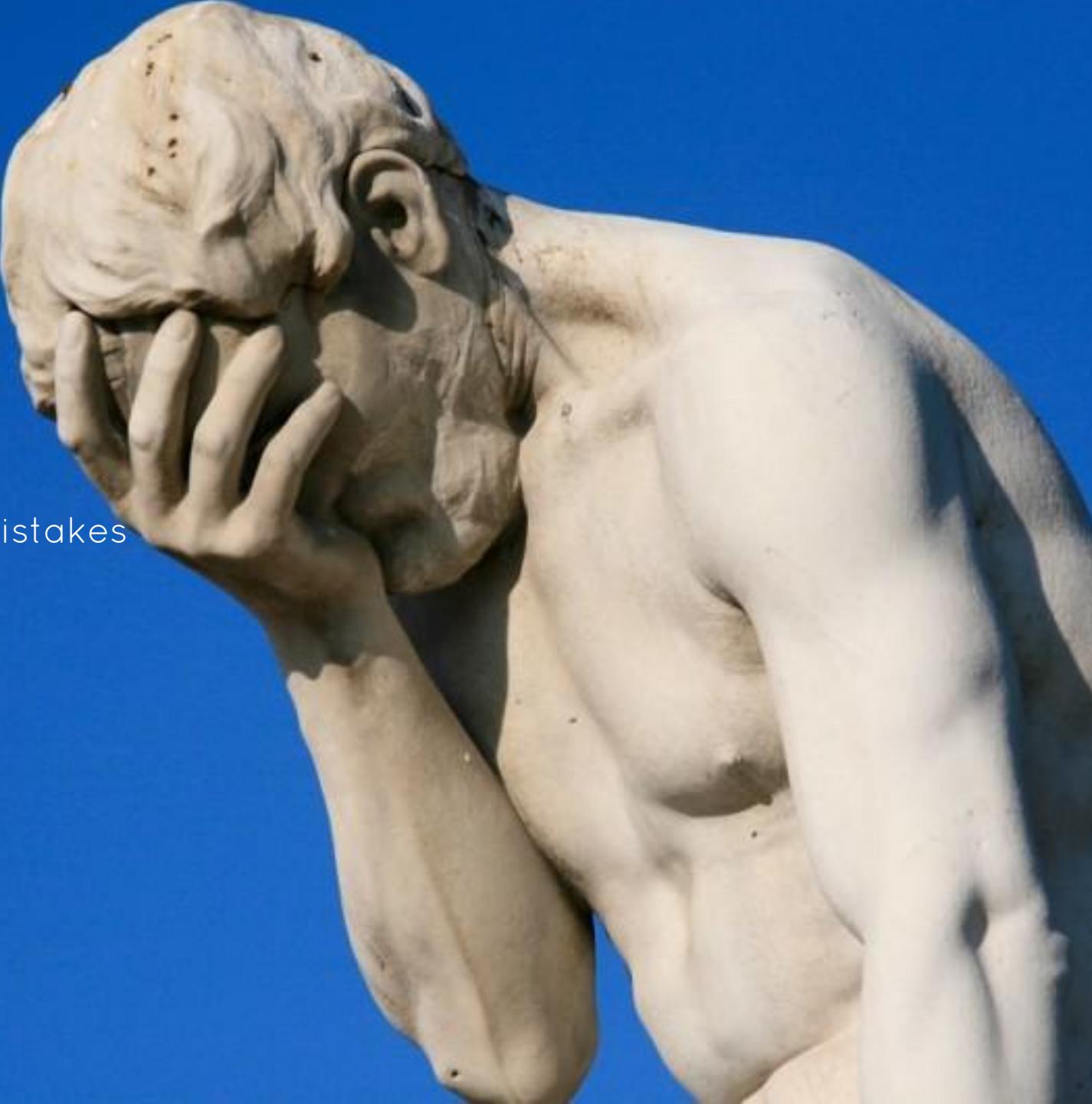
# Localized business logic



- Localized business logic

- What's the best sorting in **autocomplete suggestions** for query “PAR” between Paris, Paros & Parma for:

- Someone from Greece?
- Someone from Italy?
- Someone from France?

A classical statue of a man, likely a philosopher, in a contemplative pose. He is nude, with his left arm raised to his face, hand supporting his chin. His right arm is bent, with his hand near his chest. The statue is made of a light-colored material, possibly marble or stone, and is set against a solid blue background.

Biggest Mistakes  
(yet)

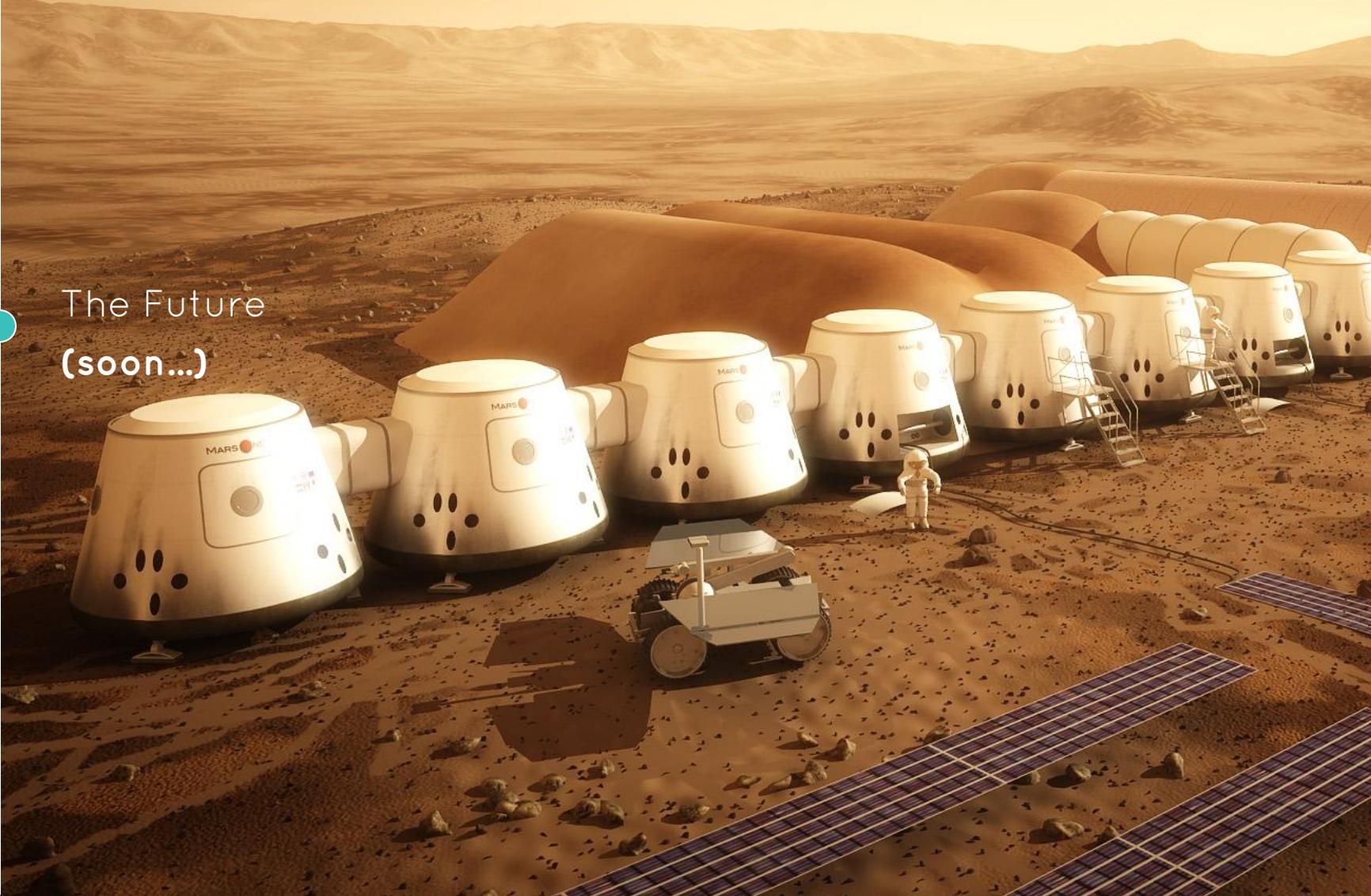
- Biggest mistakes
- Treating all localization content as plain “translations” (and delegating to client apps)

- Biggest mistakes
- Packing translations with configurations (telephone numbers, addresses, etc)

- Biggest mistakes
- Hard assumptions (if currency is “RUB” then it must be “trip.ru” in “Russian”)

- Biggest mistakes
- Treating localization projects as “translations” projects

- Biggest mistakes
- Treating localization projects as “once off” tasks



The Future  
(soon...)



- What's next?
- The **RTL** time has come (WIP)

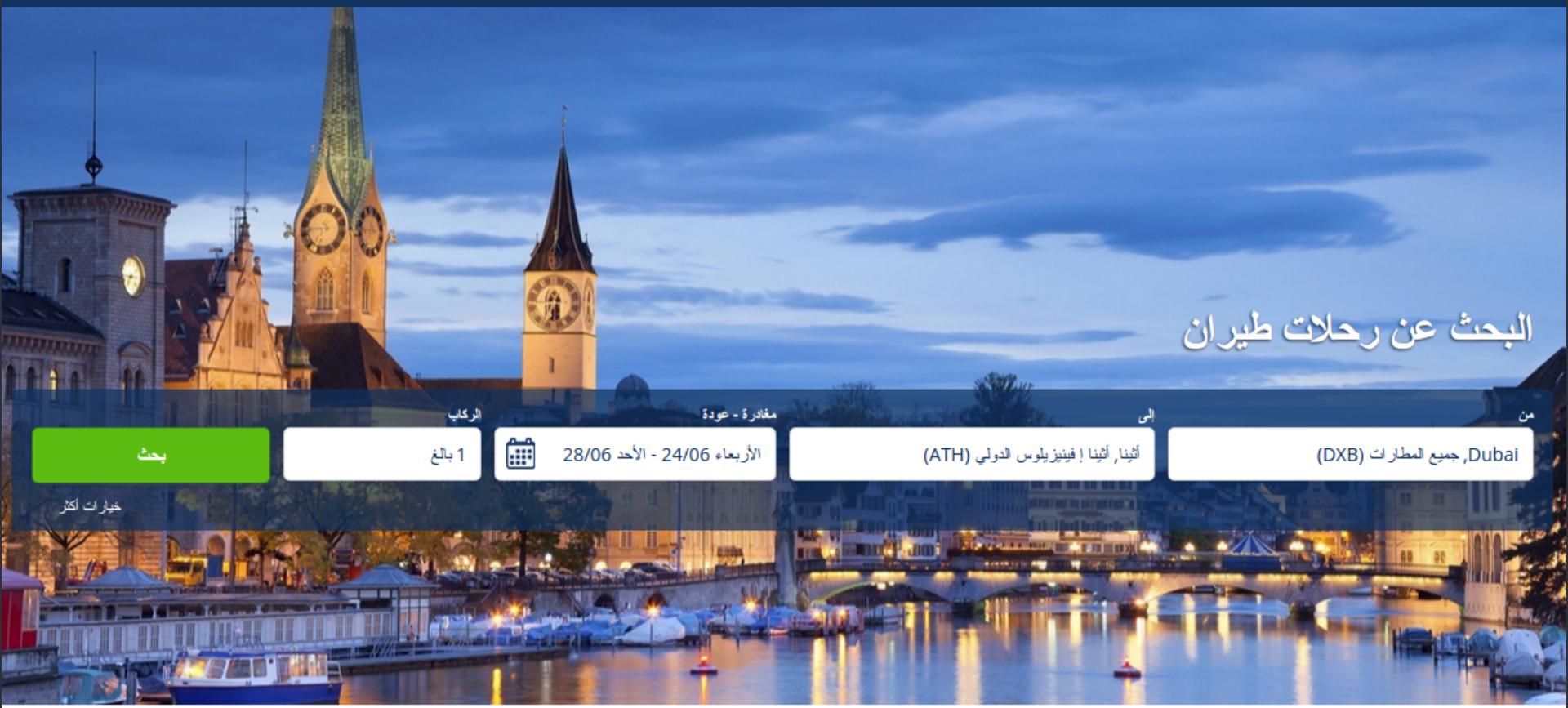
+44 8447747881

العربية | Arabic | 



حسبي ▾ دعم العملاء ▾

رحلات الطيران الفنادق البوادر سيارات



Dubai أفضل العروض لرحلات الطيران من 

**Warsaw**

الجمعة 15 مايو لمدة 18 يوم



من د.إ 2.560,82

**(Kiev (KBP)**

الثلاثاء 25 أغسطس لمدة 2 يوم



من د.إ 1.639,43

**(Moscow (DME)**

الثلاثاء 19 مايو لمدة 13 يوم



من د.إ 1.452,30

**Istanbul**

الاثنين 31 أغسطس لمدة 14 يوم



من د.إ 1.367,13

- What's next?
- Configuration service has worked astonishing well but there is room for improvements

- Configuration v2.0
  - Move more environment configurations to the service



## Configuration v2.0



- Move more environment configurations to the service
- Client subscriber functionality

- Configuration v2.0

- Move more environment configurations to the service
- Client subscriber functionality
- Partial data updates



## Configuration v2.0



- Move more environment configurations to the service
- Client subscriber functionality
- Partial data updates
- UI

- Configuration v2.0
  - Build upon what we currently have
  - Evaluate other solutions
    - Apache Zookeeper
    - etcd
    - consul
    - ???



CLDR

- Kick out 99% of ruby i18n gem and replace it with ruby-cldr  
(maintained? from twitter)



Thank you <3  
*(that's not me btw)*

