



# aria templates

*present & future...*

Bertrand Laporte  
Sophia-Antipolis, July 2013

amADEUS

# *what is aria templates?*



JavaScript & CSS framework  
for building rich web interfaces

*...some  
samples*

# travel agent reservation desktop

File Go To Account & Security Help

New Booking File New Profile

Test Booking file Member Retrieve Advanced ENTER GDS COMMANDS, FOR EXAMPLE: ANLO Amadeus

Last login: 24 November 2011 09:40:29  
Owned by DCOCHARD | Sign out

Booking file - TEST AA (1) - 23DEC - ZRH - 5HYQ4Y

**Booking File Information**

Booking File History TST History Cryptic Display TSM History Delay Booking File Place On Queue

Requested Received From (RF): TK OK24OCT11

Responsible Agent: SDAS Responsible Office: NCE1A0955 Ticketing Office: NCE1A0955

Created on 24OCT11 04:46 by 9012SD Last saved 24OCT11 04:47 Record Locator: 5HYQ4Y

**Passenger Details**

Add/Update Split Booking File Retrieve Profile

Passenger	PTC	Delete
1 TEST AA	ADT	

**Main Contact**

Business 12005512

**Itinerary Details**

Air Pricing Cancel All

Display by Chronological order Product

Flight	Carrier	Date	Day	Origin	Destination	Departure	Arrival	Stops	Class	Cancel	Details
1 LX 565	Y	23DEC	Fri	NCE 1	ZRH	07:00	08:15	0 stop	HK1		
2 LX 318	Y	23DEC	Fri	ZRH	LHR 1	10:55	11:45	0 stop	HK1		

Operated by SUBSIDIARY/FRANCHISE

**Form of Payment**

Passenger	PTC	Document	Type	Details	Amount	Delete
All	-	All	CASH	-	-	

**TST Summary(1)**

**E-ticket and Endorsement Information**

Set Ticketing Arrangement Issue e-ticket Display Fare/TST

E-tickets Car e-voucher

Passenger	PTC	Segment	E-ticket Number and Information	Show Details	Endorsement Information
1 TEST / Aa	ADT	All	Ticketing Arrangement OK 24OCT /NCE1A0955 /		FARE RESTRICTIONS APPLY 

Main Page Booking File1 Booking File2 TEST AA (1) - 23DEC ...

Go to Booking File Overview   
Cryptic Mode Integrated Partners

Your Check List

1 LX 565 NCE ZRH 23DEC Fri 07:00 08:15 HK1 Class Y TK OK 24OCT11 Cancel
2 LX 318 ZRH LHR 23DEC Fri 10:55 11:45 HK1 Class Y TK OK 24OCT11 Cancel

Save and Confirm (ER)  
File last saved 24OCT 04:47  
 Ignore (IR)

The active Office ID is NCE1A0955

# online hotel reservation

[nh-hotels.fr](http://nh-hotels.fr)

France 0821 77 42 96 Espanol | English | Deutsch | Nederlands | Italiano | Français | Português | Русский | Devise de l'hôtel Rejoindre NH World | Entrer

**NH HOTELES** Accueil Destinations Offres spéciales Réunions Voyage d'affaires Agents de voyage NH World Réservations

Home > Espagne (167 hôtels) > Barcelone (25 hôtels)

**Rechercher un hôtel**

Rechercher par destination  
Barcelone, Espagne  
Une liste de suggestions va apparaître à mesure que vous entrez le terme à rechercher.

Arrivée 2/7/2013 Départ 3/7/2013

Adultes 2 Enfants (2 - 11) 0

Code promotionnel

MEILLEUR PRIX GARANTI **Rechercher**

Si vous avez besoin d'aide pour réserver votre séjour, appelez-nous au **0821 77 42 96** 365 jours par an, 24/24.

Filtres

Tarif :

Services

- Restaurants (16 hôtels)
- Salle de réunion (23 hôtels)
- Thalassothérapie (2 hôtels)
- Prise pour ordinateur (6 hôtels)
- Parc de stationnement (18 hôtels)
- Piscine (6 hôtels)
- Bar (8 hôtels)

Catégorie de l'hôtel

- Hesperia (9 hôtels)
- NH Hotels (16 hôtels)

**Barcelone, Espagne : 25 hôtels**

Trier par : Recommandation Tarif Distance Classement Note TripAdvisor

**1 NH Calderón**

Rambla Catalunya, 26, Barcelona, 08007, Espagne  
Réservations: 0821 77 42 96  
 Afficher la carte  
Situé dans le centre-ville de Barcelone, l'hôtel NH Calderón est au cœur de tout ce qui rend cette ville aussi animée! Restaurants, boutiques, culture et affaires sont à notre porte.  
Dernière réservation effectuée : il y a 17 minutes.

**★★★**  
Chambres à partir de **298.99 EUR**  
Tarif moyen par nuit TVA incluse, des taxes supplémentaires s'appliquent  
**Réserver**

**2 NH Barcelona Centro**

Duc, 15, Barcelona, 08002, Espagne  
Réservations: 0821 77 42 96  
 Afficher l'hôtel sur la carte  
Le NH Barcelona Centro (précédemment le NH DUC DE LA VICTORIA) bénéficie d'un emplacement de premier choix au cœur du quartier gothique de Barcelone, la zone la plus ancienne et la plus historique de la ville. Le 2 avril 2012, le NH DUC DE LA VICTORIA va changer son nom pour celui de NH BARCELONA CENTRO.  
Dernière réservation effectuée : il y a 11 minutes.

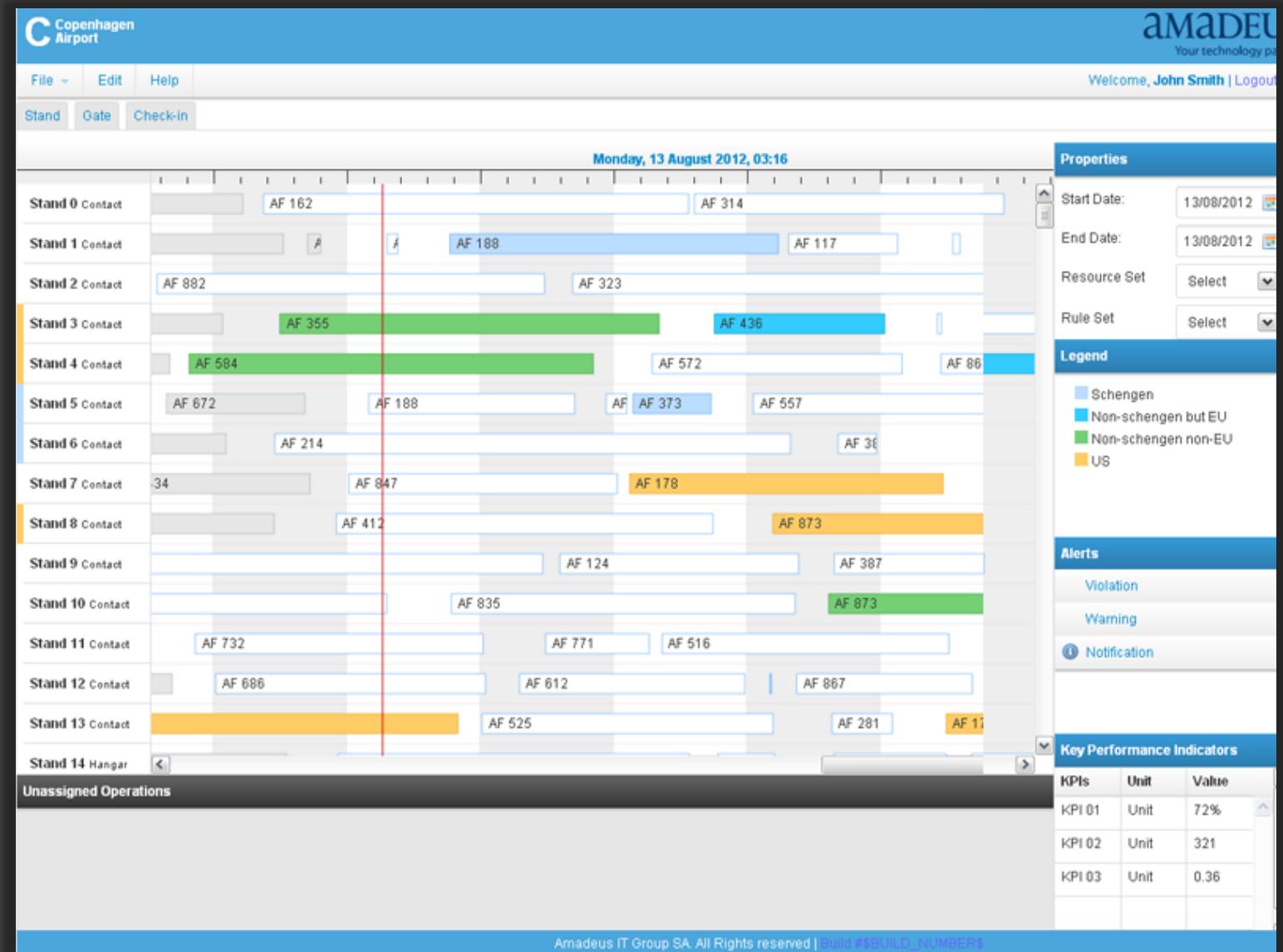
**★★★**  
Chambres à partir de **149.00 EUR**  
Tarif moyen par nuit TVA incluse, des taxes supplémentaires s'appliquent  
**Réserver**

**3 NH Numancia**

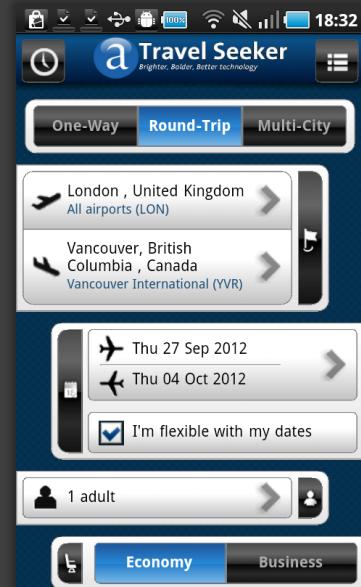
Numancia, 74, Barcelona, 08029, Espagne  
Réservations: 0821 77 42 96  
 Afficher l'hôtel sur la carte  
L'hôtel NH Numancia à Barcelone est un hôtel chic et moderne, idéalement situé dans le quartier financier de la ville, à proximité du parc des expositions, du centre-ville et de Sants Estació de Barcelone.  
Dernière réservation effectuée : il y a 17 minutes.

**★★★**  
Chambres à partir de **79.89 EUR**  
Tarif moyen par nuit TVA incluse, des taxes supplémentaires s'appliquent  
**Réserver**

# airport resource manager



# mobile applications



London (LON) Vancouver (YVR)			
Wed 26 Sep 2012 - Thu 04 Oct 2012			
Ret. 03 Oct	Ret. 04 Oct	Ret. 05 Oct	Ret. 06 Oct
-4 GBP (1%)	+11 GBP (2%)	+34 GBP (5%)	
GBP 731	GBP 691	GBP 661	
+24 GBP (3%)	-16 GBP (2%)	-46 GBP (7%)	
GBP 700	GBP 707	GBP 738	
-7 GBP (1%)	+31 GBP (4%)		
GBP 671	GBP 682	GBP 661	
-36 GBP (5%)	-25 GBP (4%)	-46 GBP (7%)	
GBP 695	GBP 705	GBP 701	
-12 GBP (2%)	-2 GBP (0%)	-6 GBP (1%)	

London (LON) Vancouver (YVR)			
Wed 26 Sep 2012			
Dep. 25 Sep	Dep. 26 Sep	Dep. 27 Sep	Dep. 28 Sep
(LHR) 06:30 → 13:40 (YVR) 15h10, 1 stop From GBP 707	(LHR) 14:50 → 13:40 (YVR) 30h50, 1 stop From GBP 707	(LCY) 09:25 → 13:40 (YVR) 12h15, 1 stop From GBP 718	(LHR) 12:30 → 23:42 (YVR) 19h12, 1 stop From GBP 719
1 DL41 12:30 → 15:30 6h20 in Minneapolis 1 DL5850 21:50 → 23:42 LHR → MSP MSP → YVR Select			
KLM (LHR) 06:30 → 13:40 (YVR) 15h10, 1 stop From GBP 723	(LHR) 08:40 → 13:40 (YVR) From		

Times

Take Off: 26 Sep, 07:30 - 26 Sep, 17:15

Landing: 26 Sep, 20:00 - 27 Sep, 08:30

Duration up to 30h50

6/27 bounds

Stops

Direct flights

1 stop

2 stops or more

Connection time

# *agenda*

1. overview: aria templates today
2. future: vision + upcoming evolutions

# *concepts*

templates / mvc / modularity

# client-side templates

data  
*(aka. view model)*

template

template  
engine



html document  
*(or fragment)*

# client-side templates

change

data  
*(aka. view model)*

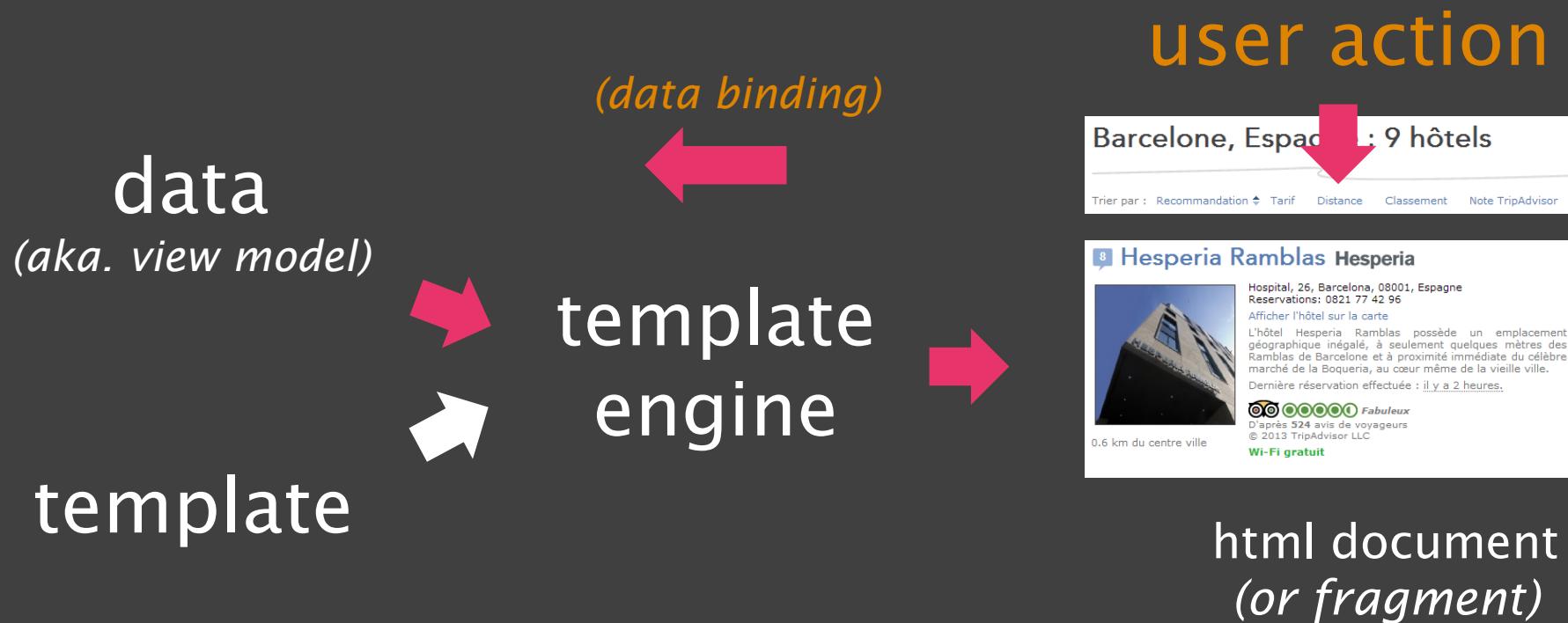
template  
engine

template  
engine



html document  
*(or fragment)*

# client-side templates



# template syntax

demo



<http://instant.ariatemplates.com>

The screenshot shows the Instant AriaTemplates interface. At the top, there's a navigation bar with the logo, a search bar, and a 'Login' button. Below it is a header with the title 'Welcome to Instant Aria Templates' and a sub-header about prototyping and debugging. The main area is divided into several sections:

- Template:** Shows the template code for a multichoice autocomplete. It includes an H2 tag for 'Multichoice Autocomplete', a div with id 'multiname' containing a click event, and a section element with id 'list' and type 'div'.
- Template Script:** Shows the script code for the template. It defines a classpath ('InstantTemplateScript'), dependencies ('aria.utils.Array'), and a prototype function 'dataReady' that sorts the data and initializes selected items.
- CSS Template:** Shows the CSS code for the template. It defines a class '.multiname' with a font of '14px "Helvetica Neue", Helvetica, Verdana', a relative position, a width of '500px', and a border of '1px solid #aaa'.
- Data Model:** Shows the JSON data model for the template. It contains an array 'names' with seven entries: 'Benoit', 'Fabrice', 'Fabio', 'David-Emmanuel', and 'Jakub'.

On the right side, there's a preview window titled 'Multichoice Autocomplete' showing a simple input field.

**mvc****model**  
JSON structure

- 
- display information
  - manage view-specific data
  - choose which view should be displayed

- structure information to be displayed in the user interface

**view**  
template(s)  
& flow controller

read &amp; update

update &amp; check

call actions

**controller**  
JS class / object

- initialize the data model
- call the server (*ajax*)
- expose ‘action’ methods to the view layer
- synchronize sub-modules

<http://todomvc.com/>

# modularity

key feature for large applications

- parallel development & testing
- scalability (*on-demand load*)
- enabler for code sharing  
(*libraries*)

...but difficult to achieve

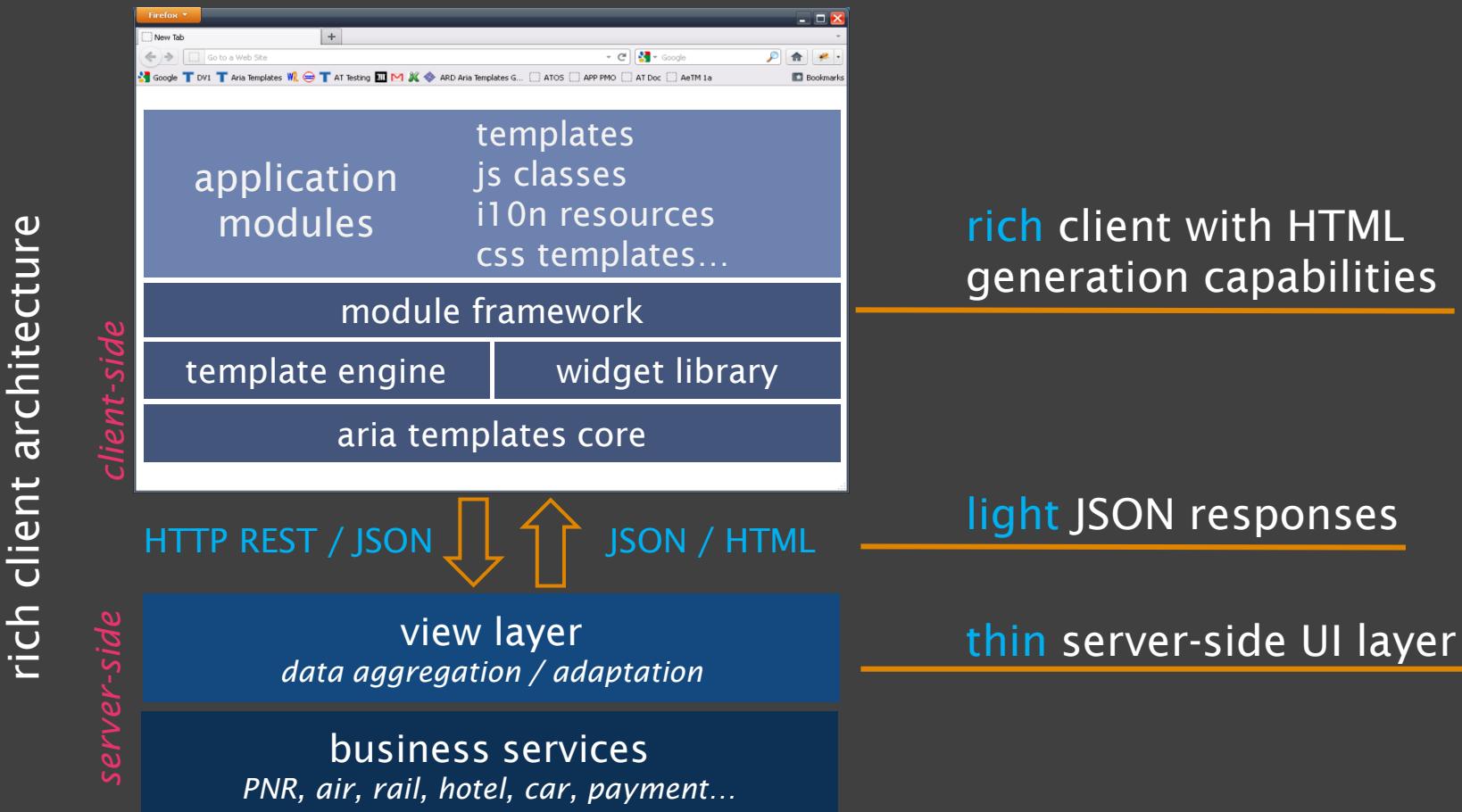
- code scoping (JS, templates, CSS)
- dependency management
- isolated configuration
- build tools
- composition model

in aria templates ‘modules’ are mini-applications

- implementing the **mvc** pattern
- **composable** as tree hierarchy



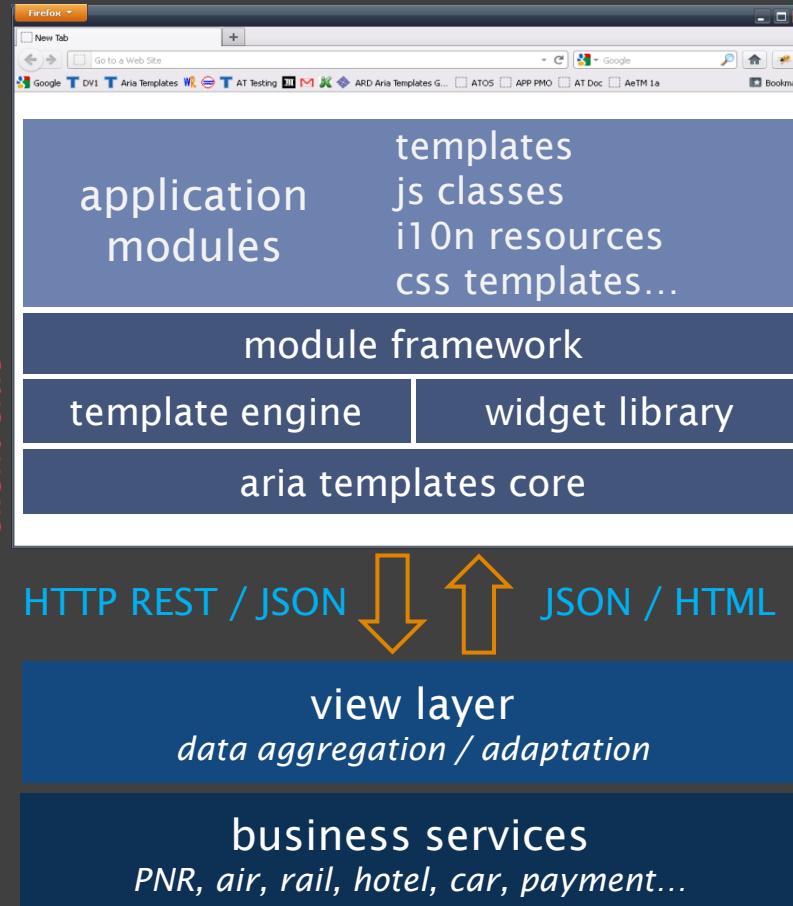
# architecture overview



# architecture overview

rich client architecture

*client-side*



## pros

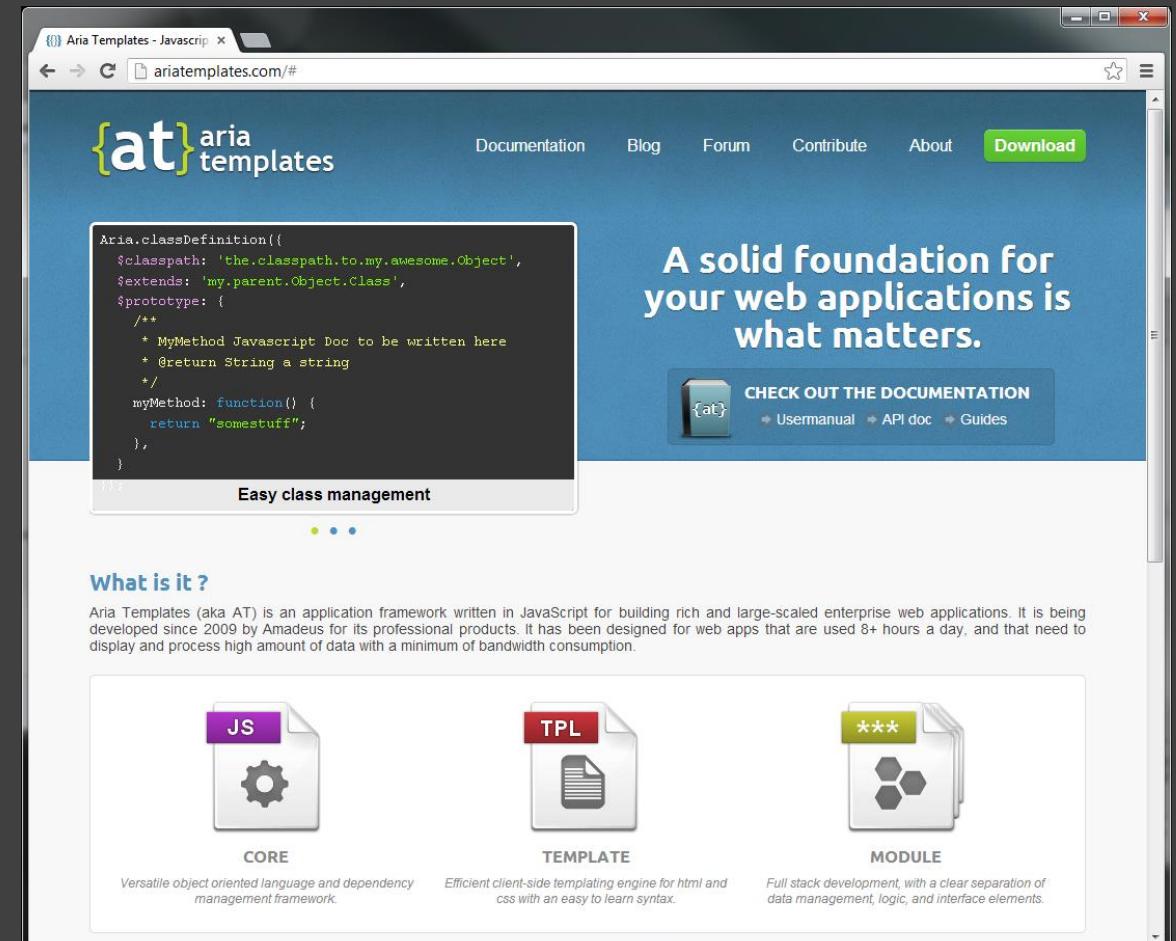
- very adapted to **b2b** and mobile (*performance, rich UI*)
- offers new **customization** opportunities
- server technology agnostic

## cons

- **disruptive approach** – migration may require advanced re-engineering
- **SEO** more complex (*b2c*)
- first page **payload** slightly higher than with thin-client architecture

# open-source

- open-source since June 2012
- framework , documentation & tools on github:
  - **atpackager**  
*grunt plugin to package AT applications*
  - **attester**  
*Parallel test runner in multiple browsers  
(similar to karma-runner)*
  - **sublime formatter**
  - and more... (cf. next)



The screenshot shows the Aria Templates website at [ariatemplates.com/](http://ariatemplates.com/). The header features the logo {at} aria templates and navigation links for Documentation, Blog, Forum, Contribute, About, and Download. A large banner on the right side reads "A solid foundation for your web applications is what matters." Below the banner, there's a call-to-action button labeled "CHECK OUT THE DOCUMENTATION" with links to Usermanual, API doc, and Guides. On the left, a code snippet is displayed in a dark box with the title "Easy class management". At the bottom, there are three sections: "CORE" (JS file icon), "TEMPLATE" (TPL file icon), and "MODULE" (three files icon). Each section has a brief description: CORE is described as a "Versatile object oriented language and dependency management framework"; TEMPLATE is described as an "Efficient client-side templating engine for html and css with an easy to learn syntax"; and MODULE is described as "Full stack development; with a clear separation of data management, logic, and interface elements".



<https://github.com/ariatemplates/ariatemplates>

# *agenda*

1. overview: aria templates today
2. future: vision + upcoming evolutions

# 3 key drivers

- move towards a suite of small independent libraries
  - ‘a la carte’ features
  - small payload
- move towards standards
  - nodeJS, commonJS, less...
  - open source development tools
- increase productivity
  - code & concept simplification
  - enhanced tools

*3 areas:*

- dependency manager
- html template engine
- css template engine

*did you say*  
***dependency  
manager !?***

# *commonJS modules for the client-side*



# *noder*

*retrieve dependencies*

```
var klass=require("hsp/klass"),  
    doc=require("hsp/document"),  
    TNode=require("hsp/rt/tnode").TNode;
```

*expose objects or functions*

```
module.exports.$RootNode=$RootNode;  
module.exports.$InsertNode=$InsertNode;
```

files as javascript modules

*main features - already available*

- file-scoped variables
- static & dynamic dependency mgt.
- on-demand load, nodeJS api
- javascript error analyzer
- simple ajax request wrapper
- available in *npm*



<https://github.com/ariatemplates/noder>

# *commonJS modules for the client-side*

*retrieve dependencies*

```
var klass=require("hsp/klass"),  
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    TNode=require("hsp/rt/tnode").TNode;
```

*expose objects or functions*

```
module.exports.$RootNode=$RootNode;  
module.exports.$InsertNode=$InsertNode;
```

# *noder*

5kb

files as javascript modules

*upcoming:*

- **packager** to group modules in multiple bundles
- **require** with dependency injection
  - *useful for unit tests!*



<https://github.com/ariatemplates/noder>

*next generation  
template engine  
what for!?*

*next generation  
template engine...*

*...what for?*

performance  
&  
productivity



- minimize payload
- better error handling
- simplify syntax
- optimize refresh

*next generation  
template engine...*

*2 directions*

offline compiler

full data-binding

- minimize payload
- better error handling
- simplify syntax
- optimize refresh

# *next generation template engine...*

25kb  
with noder



## hashspace

### *key features:*

- data-binding
- light syntax
- sub-templates
- dependency management (*noder*)
- conditional expressions
- css expressions
- error handling



<https://github.com/ariatemplates/hashspace>

```

1 var json=require("hsp/json");
2
3 # template people(d)
4     <div class="msg">Click to see more details:</div>
5     <ul>
6         {foreach p in d.people}
7             <li class="{ 'details':p.$showdetails }"
8                 onclick="{toggleDetails(p)}">
9                 {p.name}
10                {if p.$showdetails}: {p.age} years old{/if}
11            </li>
12        {/foreach}
13    </ul>
14    <div class="msg">
15        Number of people in the list: {d.people.length}
16    </div>
17 # /template
18
19 function toggleDetails(person) {
20     var visible=(person.$showdetails==true);
21     json.set(person,"$showdetails",!visible);
22 }
23
24 var d={
25     people: [
26         {name:"Omer", age:38},
27         {name:"Marge", age:38},
28         {name:"Bart", age:10},
29         {name:"Lisa", age:8},
30         {name:"Maggie", age:1}
31     ]
32 }
33
34 // display the template in the #output div
35 hsp.display(people(d),"output");

```

*new CSS templates*  
→ *2 drivers*

# *new css templates* 2 drivers

#1 keep AT  
css templates  
features



- **modular css**  
> adapted to large products,  
optimized css size, provides scoping
- **on-demand load**  
> smaller css, better performance,  
css automatically adapted to the  
templates that are displayed
- **support of runtime variables**  
> language, browser, CSS3 features  
flags (*cf. modernizr*)

# *new css templates*

## *2 drivers*

#2

improve  
syntax &  
payload



*(project still not started!)*

- move to less
  - > very adapted to css, one of the most successful css framework

```
1 @base: #f938ab;
2
3 .box-shadow(@style, @c) when (iscolor(@c)) {
4   box-shadow:          @style @c;
5   -webkit-box-shadow: @style @c;
6   -moz-box-shadow:    @style @c;
7 }
8 .box-shadow(@style, @alpha: 50%) when (isnumber(@alpha)) {
9   .box-shadow(@style, rgba(0, 0, 0, @alpha));
10 }
11 .box {
12   color: saturate(@base, 5%);
13   border-color: lighten(@base, 30%);
14   div { .box-shadow(0 0 5px, 30%) }
```

- rely on noder
  - > css & modularity management
- introduce partial compilation
  - > same as for hashspace: more optimal payload while keeping dynamic behavior

# *conclusion*

aria templates is evolving

- learning curve should reduce with upcoming evolutions
- payload should reach best-in-class level

*... and if you are interested to participate to some of our projects, feel free to get in touch with us ! (**thanks**)*

# Q&A