

Web Components @ ING

Why standard based development matters so much to us

Rik van de Ven

Utrecht, 16-02-2017



About me



Working for **ING** for around 5 years

Currently:

Lead Architect Frontend of Touchpoint Architecture

Past:

Engineer, Solution Architect, Technical Product Owner

Optional: introduction to Web Components

Custom Elements

lays the foundation for designing and using new types of DOM elements

Shadow DOM

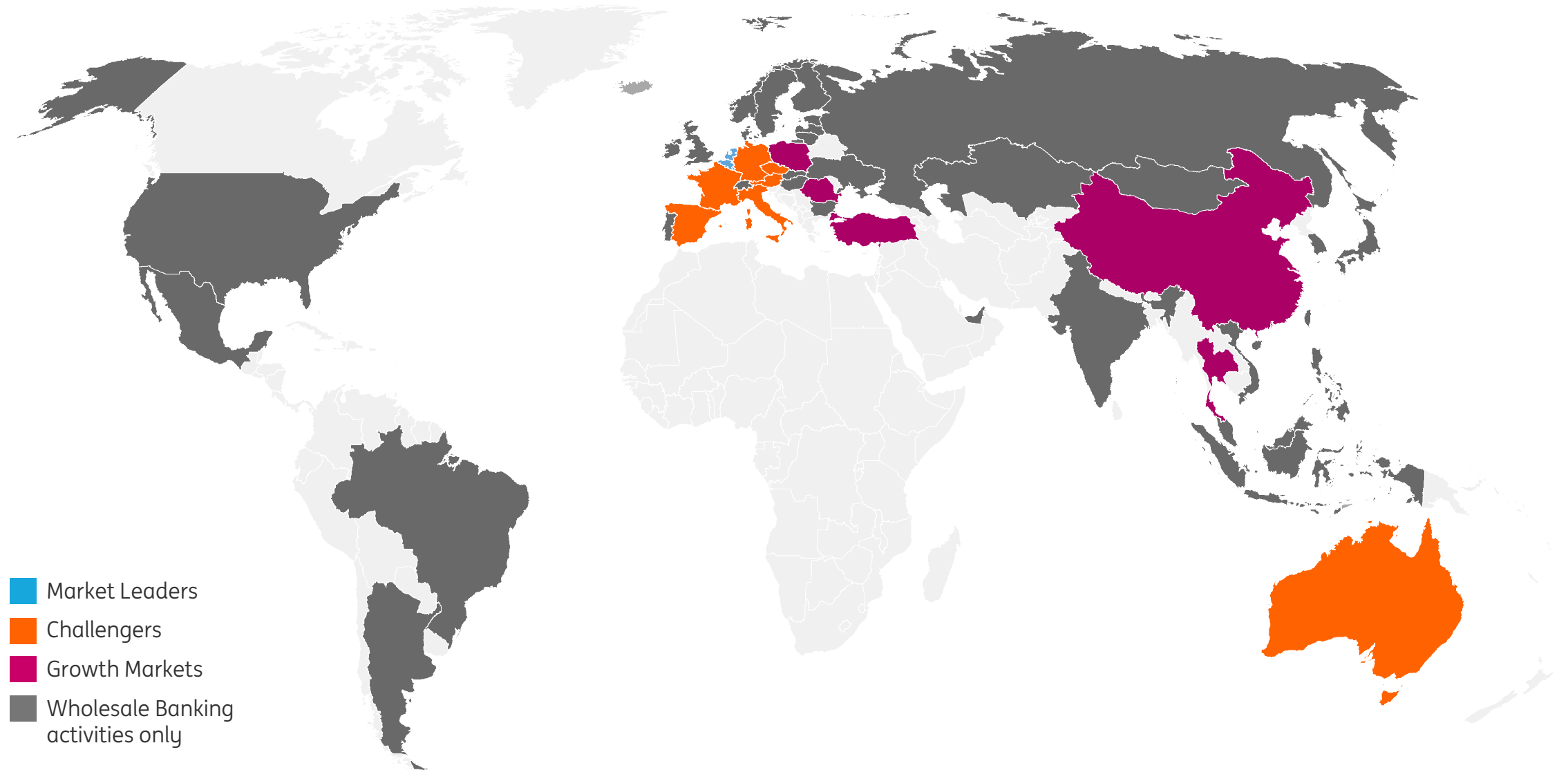
defines how to use encapsulated style and markup in web components

HTML Template

defines how to declare fragments of markup that go unused at page load, but can be instantiated later on at runtime

HTML Imports

defines the inclusion and reuse of HTML documents in other HTML documents



ING Direct Australia





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[Everyday Banking](#) [Savings](#) [Home Loans](#) [Insurance](#) [Superannuation](#) [Business](#)

Home and Contents Insurance

You could save up to 35% online.

Introducing new Home and Contents Insurance by ING DIRECT.

[Find out how](#)

Orange Everyday

Want to use every ATM in Australia for free?


[Find out more](#)

Find out how much you can save


Go to savings calculator


See how ING DIRECT can help you

Learn more in this quick and easy guide to banking with ING DIRECT.



Everyday banking





Saving focus





Buying property





Building wealth





Planning retirement



Everyday banking

When every little bit counts, bank with ING

Savings

Secure accounts with competitive interest

Home Loans

Simple to understand home loans with

5



ING Direct Spain



Oficinas y cajeros 91 206 66 55 Hazte cliente Conócenos **Área Clientes**

ING DIRECT
People in progress [Para Ti](#) | Para Negocios

Ahorro Nóminas y Tarjetas Inversión Hipotecas y Préstamos Seguros Twyp

**FANTASEAR
NO ES
INFIDELIDAD.**

Pedir un **Préstamo NARANJA** sin ser de ING DIRECT, no es infidelidad a tu banco

Desde 5,95% TIN (6,11% TAE)*.
Sin comisiones.
Sin ataduras. No tienes que domiciliar tu nómina.

[Más información >](#)

Préstamo NARANJA
Desde 5,95% TIN (6,11% TAE)*

**Cero comisiones,
cero ataduras**

Pedir un Préstamo NARANJA sin ser cliente de ING DIRECT no es infidelidad a tu banco. Contrátalo ahora, sin ataduras y sin necesidad de traer tu

**Paga a tus amigos
con Twyp**

Olvídate de hacer cuentas con tus amigos. Descárgate ahora Twyp, la aplicación con la que puedes pagar y recibir dinero de forma fácil y

Cuenta NÓMINA

0€ Mantenimiento
Transferencias
Cheques

**¡Nuevamente
nueva!**


La Cuenta NÓMINA se reinventa para darte nuevamente lo que nadie más te da. Disfruta de la única cuenta del mundo mundial con Twyp Cash,



Liczą się ludzie

ING BANK ŚLĄSKI

[Konta osobiste](#) | [Kredyty i pożyczki](#) | [Oszczędności](#) | [Inwestycje](#) | [Karty i płatności](#) | [Bankowość internetowa](#) | [Ubezpieczenia](#) | [Premium](#) | [Bankujesz-zyskujesz](#)



LOTERIA PROMOCYJNA BLIKOMANIA

Płać, wypłacaj, przelewaj
BLIKIEM i wygraj
nawet 100 000 złotych

[Sprawdź](#)

Organizatorem loterii Blikomania jest Polski Standard Płatności.
Sprawdź regulamin na stronie: www.blikomania.pl



 Qui est ING Direct ?

 Rechercher

 Nous Contacter

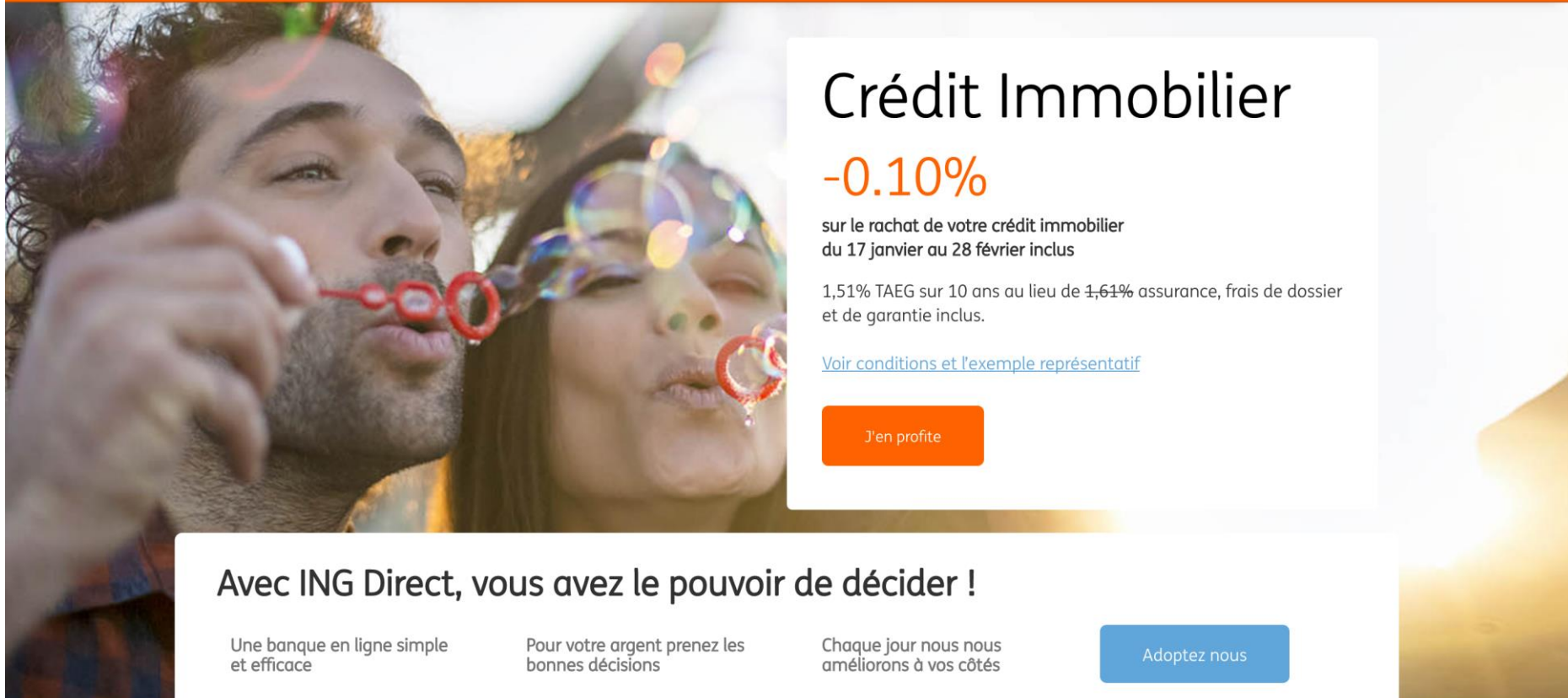
Espace client

Nos Produits ▾

coachING

La communauté ING Direct

Être client, c'est comment ?



Crédit Immobilier

-0.10%

sur le rachat de votre crédit immobilier
du 17 janvier au 28 février inclus

1,51% TAEG sur 10 ans au lieu de 1,61% assurance, frais de dossier
et de garantie inclus.

[Voir conditions et l'exemple représentatif](#)

J'en profite

Avec ING Direct, vous avez le pouvoir de décider !

Une banque en ligne simple
et efficace

Pour votre argent prenez les
bonnes décisions

Chaque jour nous nous
améliorons à vos côtés

Adoptez nous

ING DirectBank Germany



BIC: INGDEFFXXX

Begriff / Frage / WKN / ISIN



Start

Kontakt



Log-in Banking

Über uns

Girokonto

Sparen

Wertpapiere

Baufinanzierung

Kredite

Altersvorsorge

Service



Dauerhafte Geldreserve

Als günstige Alternative zum Dispo

[› Zum Rahmenkredit](#)

Rahmenkredit als Geldreserve

Auf unerwartete und spontane Ausgaben stets vorbereitet sein mit einem Kreditrahmen bis 25.000€ - flexibler und günstiger als ein Dispo.

[› Zum Rahmenkredit](#)


Deutschlands beliebteste Bank

- › 8 Mio. zufriedene Kunden
- › Top Service täglich rund um die Uhr
- › ING-DiBa Versprechen für Ihre Sicherheit
- › Kostenlos Bargeld: Geldautomat jetzt suchen






[Particulier](#) | [Personal Banking](#) | [Private Banking](#) | [Zakelijk](#) > Hulp bij inloggen [Inloggen](#)

 [Producten](#) | [Financiële thema's](#) | [Community](#) | [Rentepunten](#) | [Service & Contact](#)

Laatste kans: tot € 300 cadeau
als u nu start met beleggen


[Profiteer nu](#)



[Tot € 300 cadeau voor beleggers](#) | [Binnenkort op vakantie?](#) | [Waar een wil is](#)

Goedemiddag,
U heeft vandaag vast wel meer te doen.
Daarom willen we dat u snel en eenvoudig vindt wat u zoekt.

 [Zoeken](#)



De voordelen van een creditcard



How can we share?



ING DIRECT
Home Banking con life

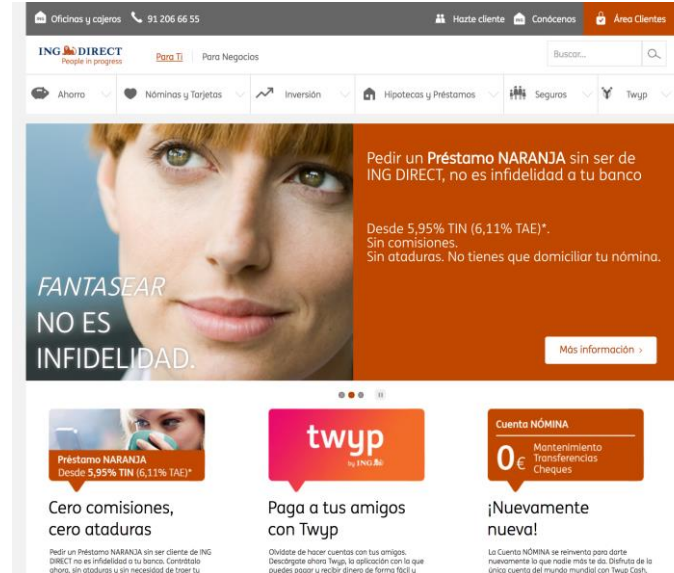
Everyday banking Savings Home Loans Insurance Superannuation Business

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ING DIRECT
Para Ti Para Negocios

Buscar...

Ahorro Nóminas y Tarjetas Inversión Hipotecas y Préstamos Seguros Twyp

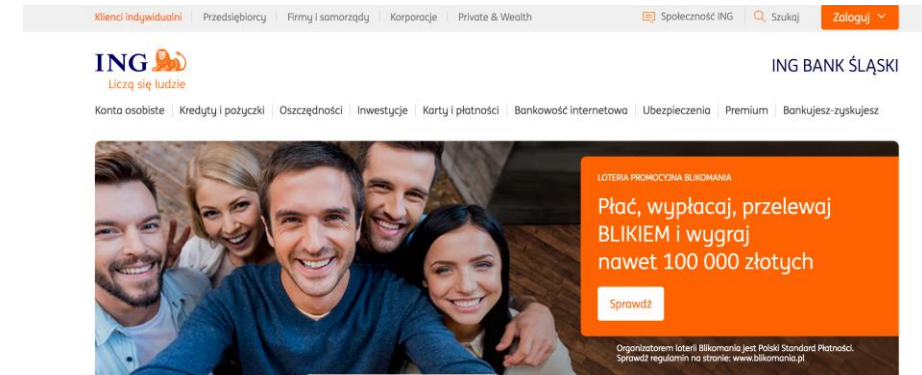
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Más información

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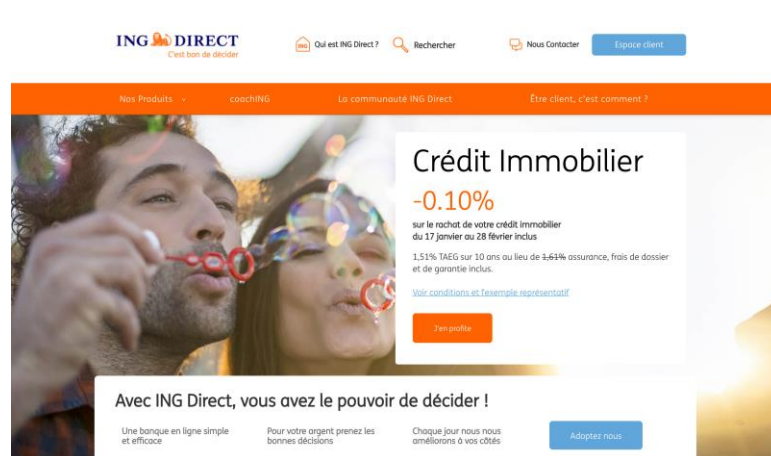
ING BANK ŚLĄSKI
Licz się ludzie

Klienci indywidualni Przedsiębiorcy Firmy i samorządy Korporacje Private & Wealth

Konta osobiste Kredyty i pożyczki Oszczędności Inwestycje Karty i płatności Bankowość internetowa Ubezpieczenia Premium Bankujesz-zyskujesz

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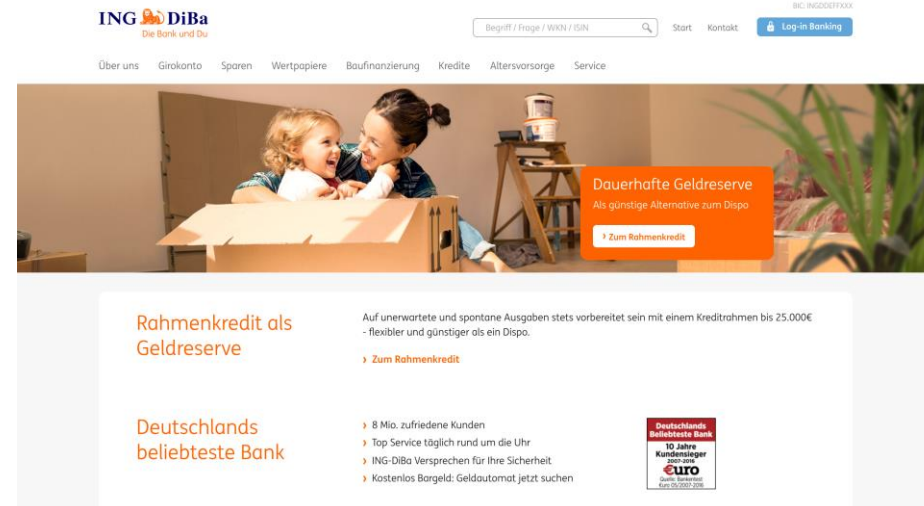
ING DIRECT
C'est bon de décider

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ING DiBa
Die Bank und Du


Begriff / Frage / WKN / ISIN Start Kontakt Log-in Banking

Über uns Girokonto Sparen Wertpapiere Baufinanzierung Kredite Altersvorsorge Service

Dauerhafte Geldreserve
Als günstige Alternative zum Dispo
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ING
Particulier Personal Banking Private Banking Zakelijk

Producten Financiële thema's Community Rentepunten Service & Contact

Zoeken

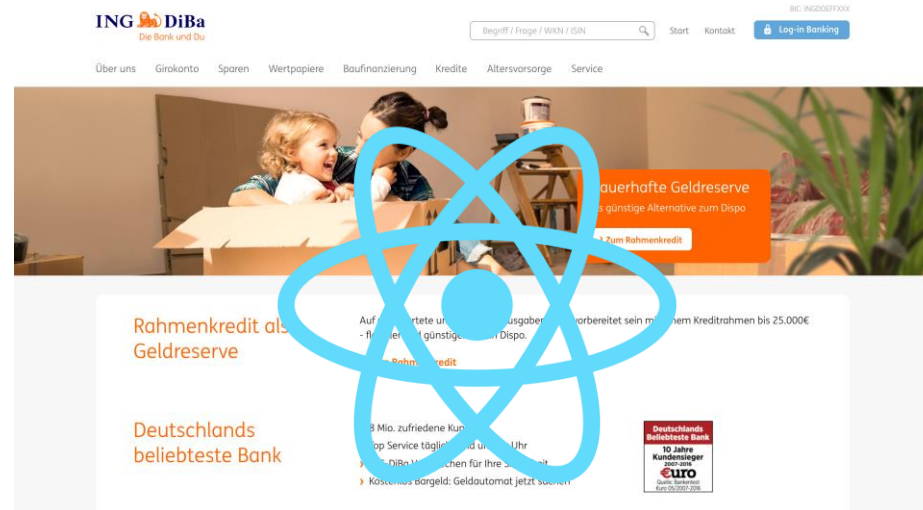
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Zoeken

De voordelen van een creditcard

How can we share?



Quoting our chief: 'RDD'.. Whut?




OK, fine, we will all use the same!






Scale?



















































[Overview](#) | [The Guide](#) | [Build](#) | [A/B Testing](#) | [SpectingularJS](#)

 [Build Feedback](#) | [Roadmap](#) | [Add module](#)

Build Results

 **By module** |  **By build** |  **Queue**

Modules

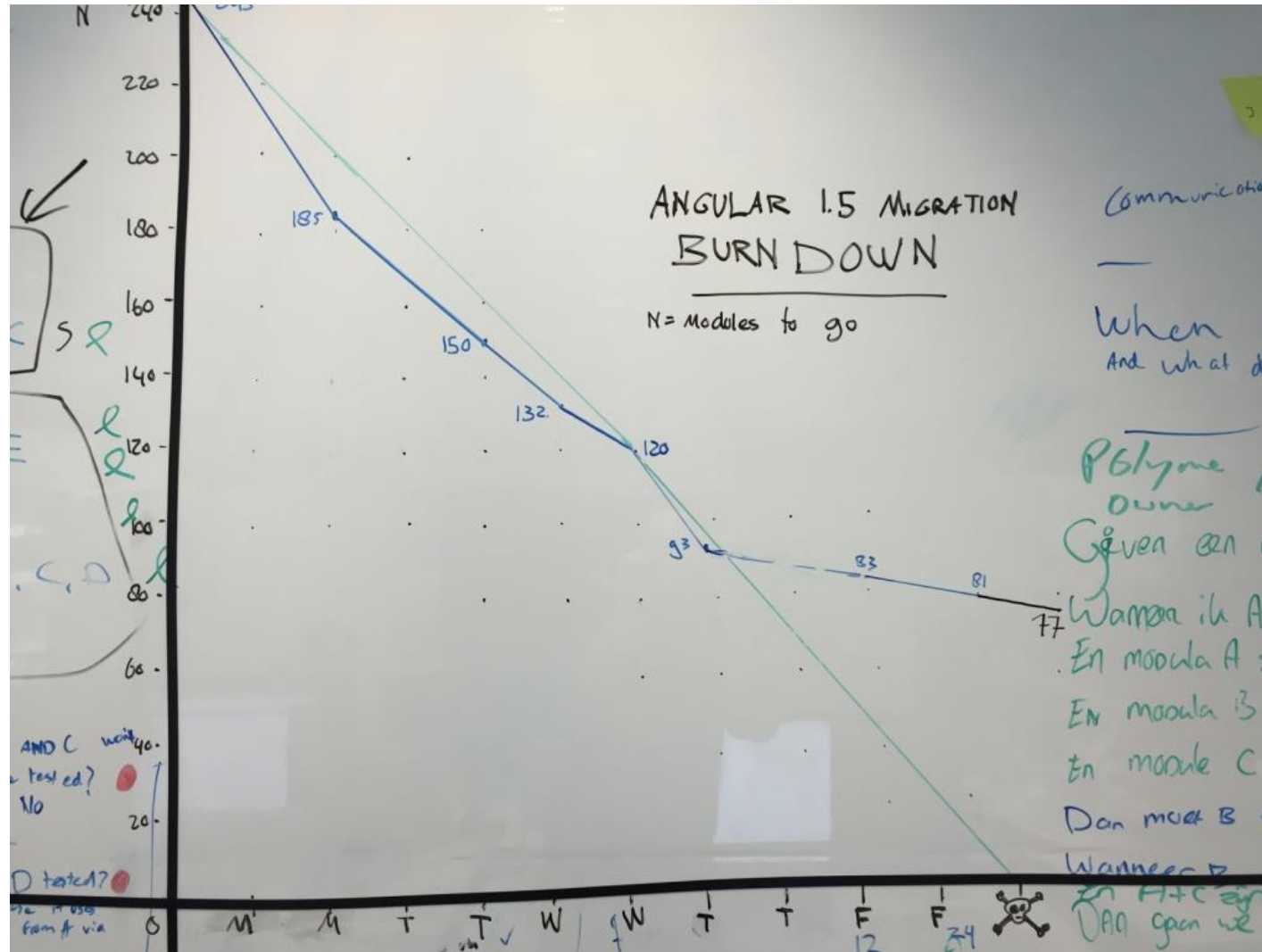
Module	Last stable	Last unstable
account	 Build:12584 Version:	 Build:19589 Version:
changepackage	 Build:20323 Version:2.2.3	 Build:20318 Version:2.2.3-build:20318+sha.a8d0d34
contacting-api-client	 Build:20694 Version:0.4.38	 Build:20693 Version:0.4.39-build:20692+sha.d830a0d
creditcardsComponents	 Build:20055 Version:1.0.6	 Build:19924 Version:1.0.6-build:13883+sha.9f68e0d
cryptojs-angular	 Build:20928 Version:0.0.11	 Build:20936 Version:0.0.12-build:20920+sha.01d7fde
daily-start	 Build:20772 Version:0.0.9	 Build:19924 Version:0.0.12-build:16979+sha.13faf0a
experiments-core	 Build:14730 Version:0.1.2	 Build:14734 Version:0.3.3-build:14734+sha.5ba80e9
fPortalMobileBankingRouting		 Build:5368 Version:0.0.1-build:5368+sha.3cfd3d0
forwardPlanningTest	 Build:17325 Version:	 Build:17328 Version:
FraudRiskFE	 Build:20055 Version:0.0.1	 Build:19924 Version:0.0.1-build:18631+sha.2ae0a42
gAddressbookWA	 Build:20722 Version:1.0.4	 Build:19924 Version:1.0.0-build:16158+sha.7f0138c
gAppraisalRequest	 Build:20076 Version:1.0.0	 Build:20071 Version:1.0.0-build:12743+sha.5268eed
gApprovalCustomerAssistedDirective	 Build:20057 Version:1.1.4	 Build:20574 Version:1.1.5-build:20574+sha.f693149
gApprovalCustomerAssistedPlugin	 Build:20326 Version:1.1.15	 Build:20574 Version:1.1.15-build:20319+sha.2cfa2f2
gAuthzMgmtWA	 Build:20055 Version:0.0.2	 Build:19924 Version:0.0.3-build:18338+sha.1952883
gBalanceOverview	 Build:20055 Version:1.0.2	 Build:20653 Version:1.0.3-build:20624+sha.fb921d3
gBankId		 Build:19924 Version:0.0.1-build:19403+sha.7040d10
gBetaalverzoek	 Build:20772 Version:0.0.1	 Build:20598 Version:0.0.2-build:20598+sha.5a688c1
gBlockPermanentlyDebitCard	 Build:20055 Version:1.0.21	 Build:20432 Version:1.0.22-build:20315+sha.280bccb
gCalculateTermPayment	 Build:20772 Version:1.0.25	 Build:20006 Version:1.0.24-build:18532+sha.860d39a
gCalendar	 Build:20772 Version:1.1.13	 Build:20006 Version:1.1.13
gCalendarComponents	 Build:20772 Version:0.0.12	 Build:19924 Version:0.0.11-build:18422+sha.cd1c446
gCancelInsurances	 Build:20825 Version:1.0.1	 Build:20803 Version:1.0.3-build:20803+sha.e0eb6d9
gCancellationAssistance	 Build:20889 Version:1.0.0	 Build:20881 Version:1.0.2-build:20881+sha.ad394c2
gCashOrderWA	 Build:20858 Version:0.0.25	 Build:20866 Version:0.0.26-build:20866+sha.1beb76b
gChangeContraAccountGroetGroterRekening	 Build:20211 Version:1.0.5	 Build:20215 Version:1.0.5-build:11753+sha.56b48bf

The screenshot displays a game's squad management interface. It features a grid of numerous squads, each with a small icon, a name, and a status indicator (green or red). A large, semi-transparent orange text overlay is positioned in the center, reading "> 75 squads".

411 seperate modules
(243 in prod)

16

Migrating...



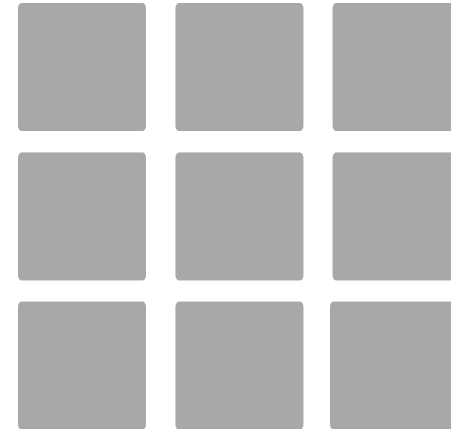
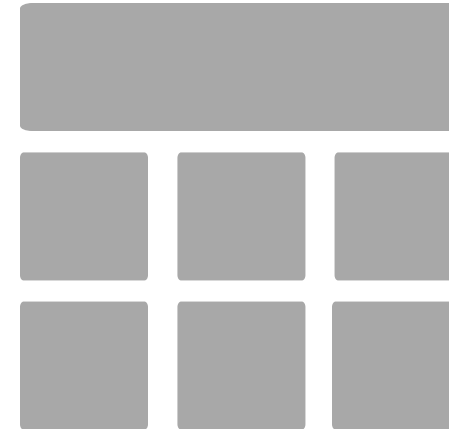
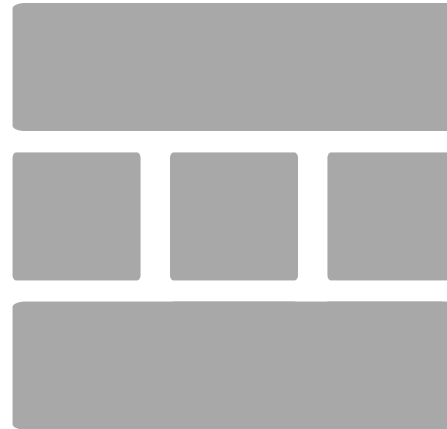
Redefine Architecture

Target Architecture

Monoliths



Client / Server



Target Architecture

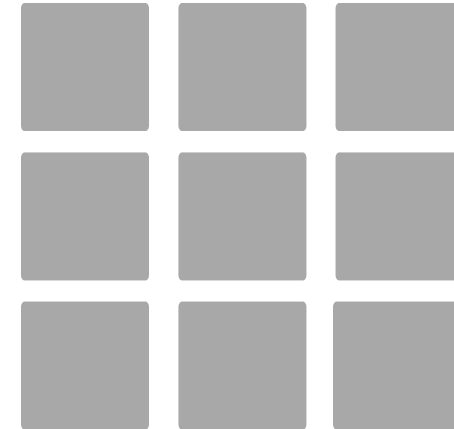
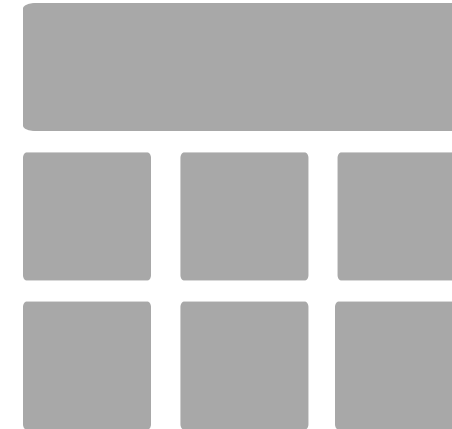
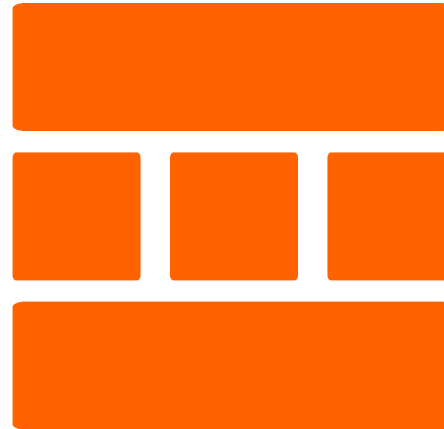
Monoliths



Client / Server



Current



Web Frontends
SOA (APIs)
Mainframe / Database

Target Architecture

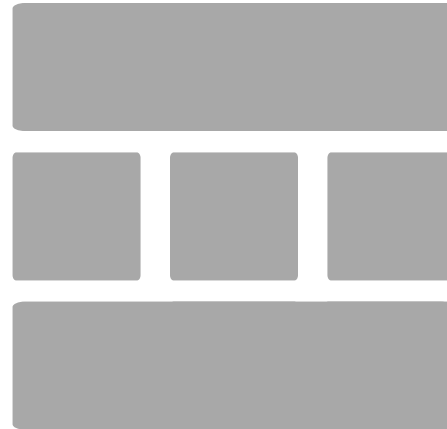
Monoliths



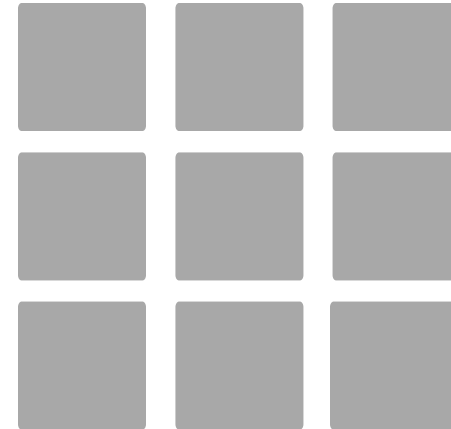
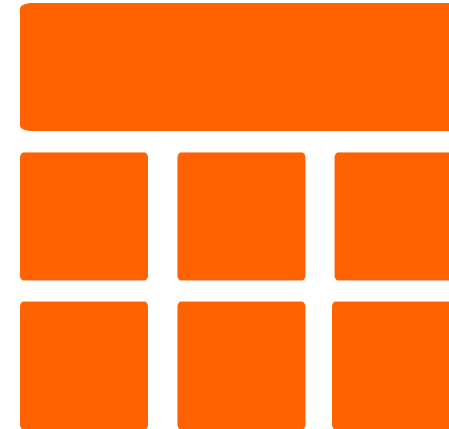
Client / Server



Current

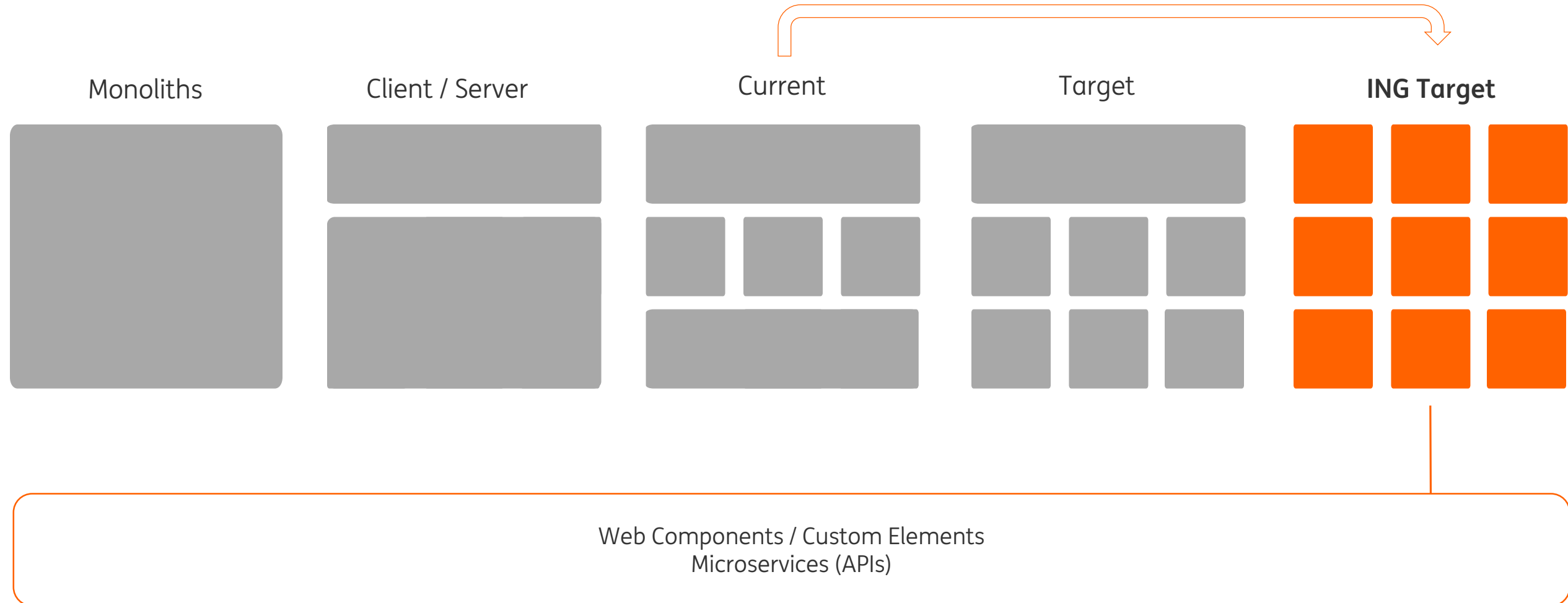


Target



Web Frontends
Microservices (APIs)

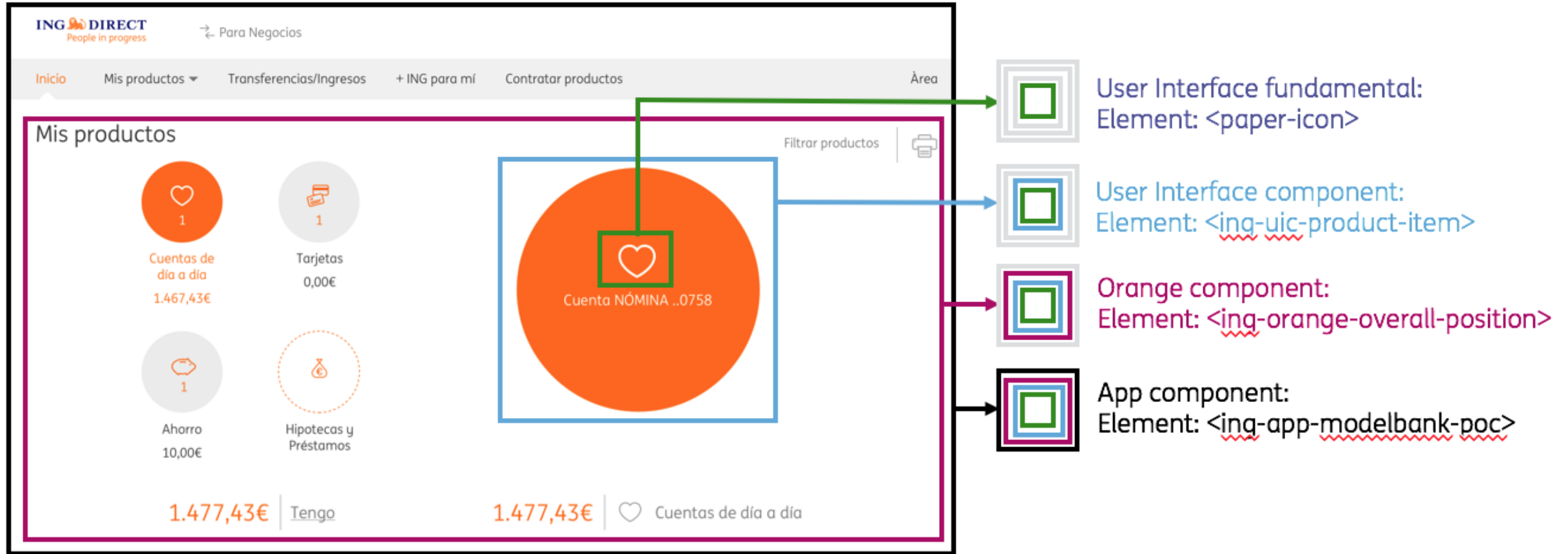
Target Architecture



**Standardise on standards, not on
frameworks**

#usetheplatform

Components, components, components



Inspired by Dan Abramov

Presentational Components

Concerned with **how things look**

No dependencies on the rest of the app

Don't specify how the data is loaded

Receive data via properties

Examples:

Page, Sidebar, List

Container Components

Concerned with **how things work**

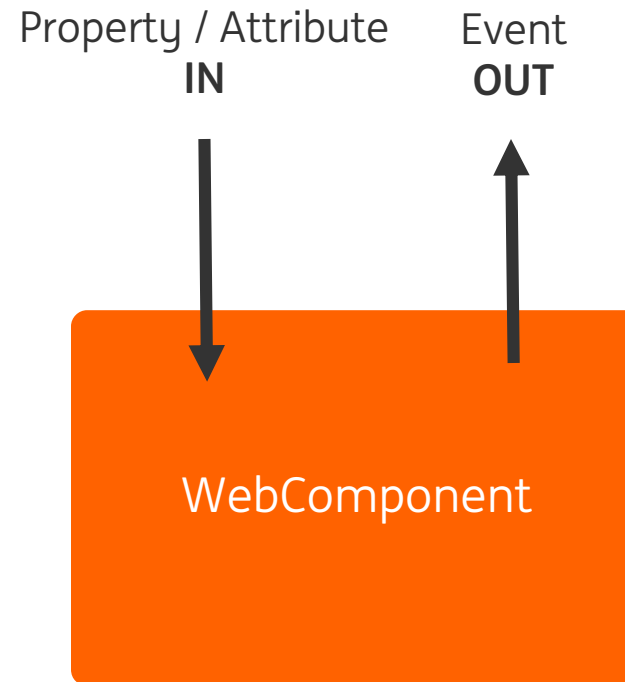
Provide the data and behavior to presentational or other container components

Usually don't have DOM markup of their own

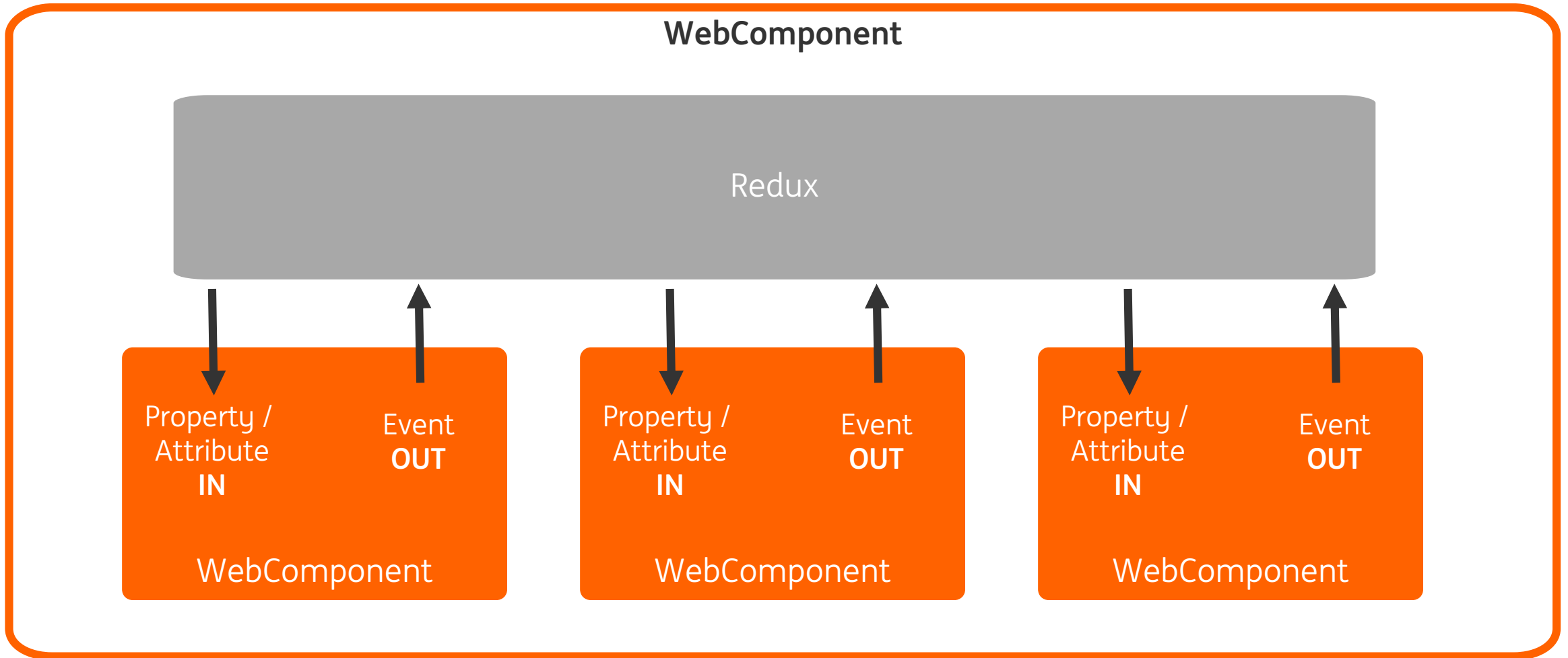
Examples:

UserPage, FollowersSidebar, FriendsList

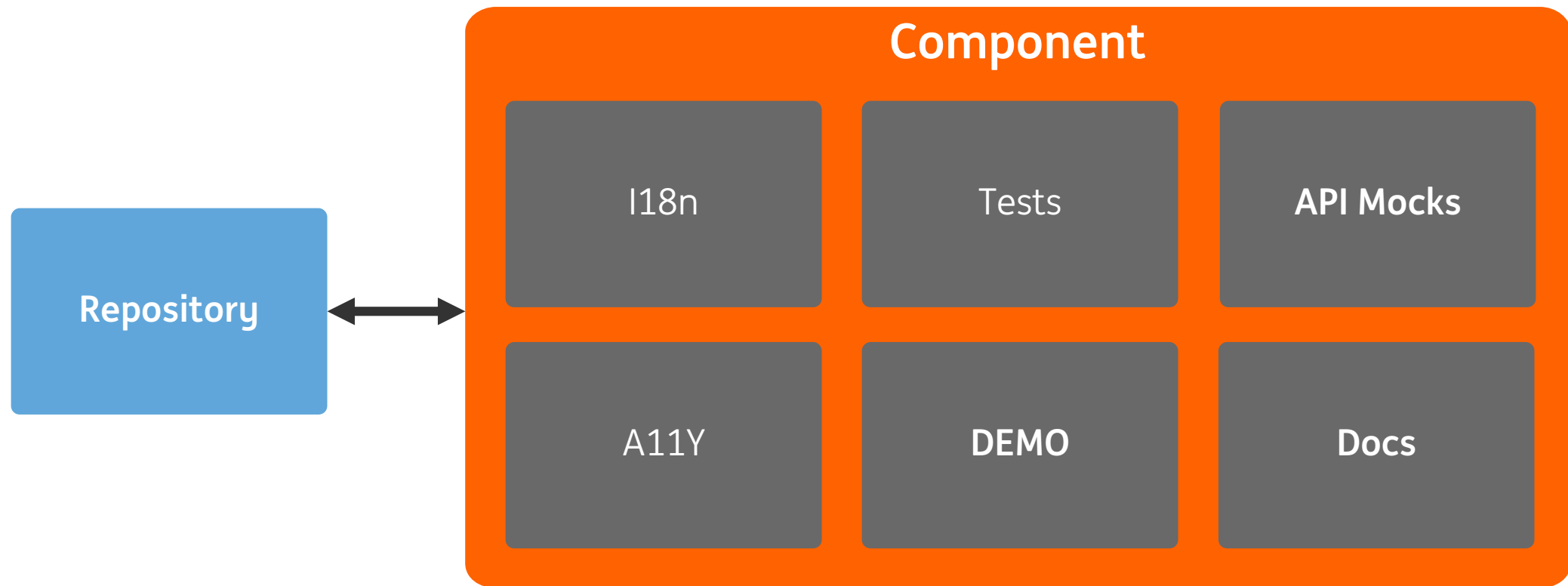
Component Communication



Redux for managing application state



A component is more than code



What about all the sharing?



Demo: The Guide

Thank you

Appendix - <http://staltz.com/react-could-love-web-components.html>

You know why Facebook won't be built on Web Components? Because Facebook builds all their leaf components. **It's all custom.** It's the same reason why Facebook won't have any use for Material UI components, probably ever. Same reason why **Facebook won't use your average jQuery plugin.**

Does that mean you should not use Material UI nor jQuery plugins nor Web Components? No. Facebook is not a regular site. **A lot of things and technologies and choices that impact Facebook are completely different to what most web developers have to face in their jobs.** This is not science, but I assume that 90%+ of websites in the world have less than 1% of the amount of active users that Facebook has. The type of websites we build are different, and the way of building is also different. **We need: quick reusability, ready made components, and just getting it done.** Often it doesn't need to be ultra fast, it doesn't need to be ultra tiny. Often we just need to get it done, and neatly.

Web Components are for you and me, the mere mortal web developers. They are useful like Material UI is. Love them back and you'll make the web a place with more exchange of reusable code. **A place with more sharing.**

Appendix - TODO

TODO: very short code based introduction to web components, in case of emergency...