

A stylized, abstract logo for Viadeo, composed of dark grey and black geometric shapes with white outlines, and several yellow and orange triangular and polygonal shapes. The logo is positioned on the left side of the slide, partially overlapping the title.

# Moving Viadeo to AWS

Julien Simon, *Chief Technology Officer*

[jsimon@viadeoteam.com](mailto:jsimon@viadeoteam.com)  
[@julsimon](https://twitter.com/julsimon)

# Viadeo

## Europe

- ◆ Founded in 2005
- ◆ Market leader, with 9m members
- ◆ Very strong ties with local recruiters
- ◆ Strong corporate offering, with 21% of top 1,000 companies recruiting on Viadeo

## Russia

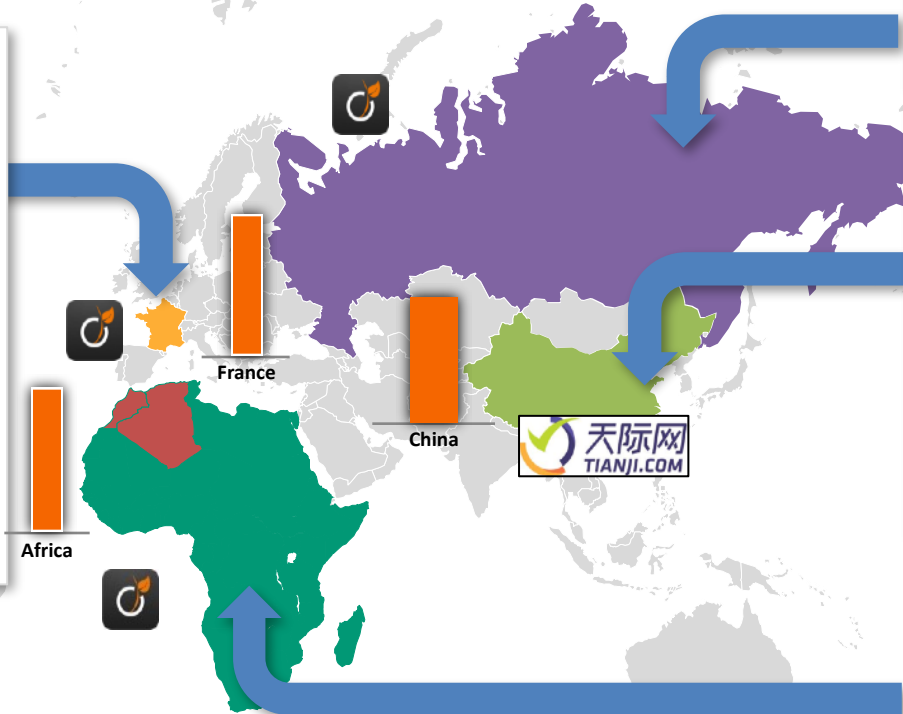
- ◆ JV 50/50 with local partner,
- ◆ 1m members
- ◆ Position in high quality professional profiles

## China

- ◆ Acquired in 2008
- ◆ #1 with 25m members
- ◆ Trusted source of professional data in China
- ◆ Bringing trust into the professional world
- ◆ Strong local management team

## Africa

- ◆ Ideally positioned organically with strong momentum
- ◆ #1 with 3m members



viadeo

Rechercher Recherche avancée

Profil Contacts Jobs & Formations Entreprises Participer Accès recruteur Premium

**Julien Simon** ★

Recrute des spécialistes Java/Data/Sécurité

Chief Technology Officer, Viadeo

Paris, France 130 contacts

Partager mon profil

En résumé Mes contacts Ma bibliothèque Mon activité sur Viadeo

**Ma présentation**

\*\*\* VIADEO RECRUTE \*\*\*  
<http://www.viadeo.com/fr/company/viadeo/job>

Directeur Technique / Chief Technology Officer

- Définition et pilotage de projets stratégiques complexes (design, build, run)
- Capacité à innover et à transformer de manière continue (organisation, technologie, produit)
- Relations et négociations internationales (clients, partenaires, fournisseurs)
- Encadrement d'équipes jusqu'à 150 personnes en France et à l'étranger

**Ma bibliothèque**

Java 8 in Action: Lambdas, streams, and function...  
 Raoul-Gabriel Urma, Mario Fusco, Alan Mycroft

The Pragmatic Programmer

viadeo

Rechercher Recherche avancée

Profil Contacts Jobs & Formations Entreprises Participer Accès recruteur Premium

Quelle banque en ligne peut vous faire économiser jusqu'à 1916€/an sur vos frais bancaires ?

Comme Laura, retrouvez vos connaissances et devenez 3 fois plus visible !

LES CONNAISSEZ-VOUS ?  
 plus de 100 contacts potentiels

Marie Jeanne Vogel  
 Manager - Ressources...

Frédéric Cesbron  
 Chef de projet études...

Christophe GACEM  
 Directeur des système...

Nicolas PARRON suit une entreprise

DCNS  
 +10000 employés

Emmanuel DETROY a de nouveaux contacts

Sylvia Mund  
 Comédienne voix off allemande et chant

Marine Tumelaire  
 Artist illustrator, comics book author and colorist, Art teacher

AVEC LE SERVICE  
 > VOTRE POTENTIEL MARCHÉ  
 UN CONSULTANT APEC VOUS AIDE  
 A IDENTIFIER LES SECTEURS  
 QUI VOUS CORRESPONDENT.

## Rencontres professionnelles

Écran à la réalité, il n'y a plus qu'un pas !

1400 membres Viadeo de vous rencontrer dans la vraie vie



1400 visites depuis votre inscription

Qui a consulté mon profil ?



Voir tous mes visiteurs

### Carrière

Intérêts des projets / missions

Responsabilité / Autonomie

Reconnaissance du manager

Formation et développement des compétences

Evolution de carrière / Mobilité

Réinitialiser



Projets

Evolution

Responsabilité

Formation

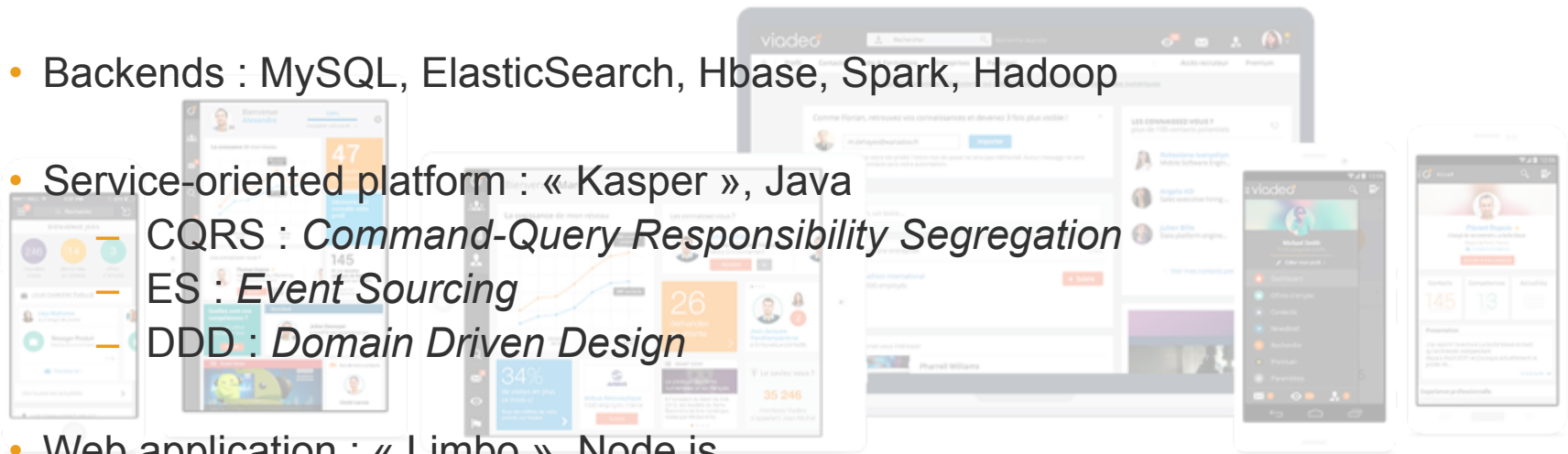
Reconnaissance

4.2 / 5  
mon évaluation

3.8 / 5  
la moyennes

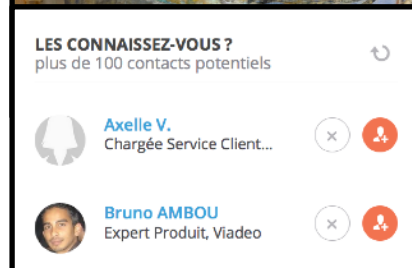
# Our current platform

- Infrastructure : 250 Linux servers hosted in San Francisco, CA
- Backends : MySQL, ElasticSearch, Hbase, Spark, Hadoop
- Service-oriented platform : « Kasper », Java
  - CQRS : *Command-Query Responsibility Segregation*
  - ES : *Event Sourcing*
  - DDD : *Domain Driven Design*
- Web application : « Limbo », Node.js
- Mobile applications : iOS and Android



# AWS @ Viadeo : the story so far

- 2011 : file storage (S3)
- 2012 : Viadeo office flooded! Internal servers destroyed  
→ All services rebuilt in AWS in **48h** (VPC, EC2)
- 2013 : data processing (Hadoop, EMR)
- 2014 : more data !
  - New analytics infrastructure :  
Snowplow → S3 → Redshift  
(≈ 20 million events / day for starters)
  - Content personalization : EMR, Spark



# AWS @ Viadeo : the story so far

- Infrastructure live in 3 regions (us-east-1, us-west-2, eu-west-1)
- 4 VPC
- ≈ 100 EC2 instances (half production, half development)
- ≈ 15 TB in S3
- 2 Redshift clusters (5 instances each)
- AWS services currently in production at Viadeo :
  - Core infra : VPC, Route 53, IAM, S3, CloudFront,
  - Instances : Elastic Load Balancing, Elastic Beanstalk, CloudFormation, EC2
  - Data storage & processing : RDS, EMR, Redshift



# Enter physical infrastructure challenges...

- Improving our **agility**
  - How can we deploy infrastructure as often as we deploy code (i.e. every day)?
  - How can we experiment quickly and at (almost) zero cost?
- Optimizing our **spend**
  - How can we avoid CAPEX peaks caused by hardware refresh?
  - How do we best adapt spend to traffic and business conditions?
- Implementing a **stronger Disaster Recovery** plan
  - ...without building a 2<sup>nd</sup> DC which we don't need anyway
- Scaling storage & CPU for **data processing**
  - Do we really need big servers, lots of rack space and lots of power?
  - How do we efficiently handle unpredictable workloads?



# Why we decided to move everything to AWS

- We want to **focus on our real job** : building a great service
  - No more issues with hardware vendors, no more licensing hell. Ever!
  - Experimenting, (re)deploying & scaling are just a few clicks away
  - Great ecosystem of SaaS partners running in AWS
- We've been using it for a while now and **it just works**
  - AWS CloudFormation is infrastructure as code
  - « Time to server » is in minutes, not days
- We're **ready** and **eager** for it : Agile and DevOps are strong Viadeo values
- We want to **measure ROI** and **optimize cost**



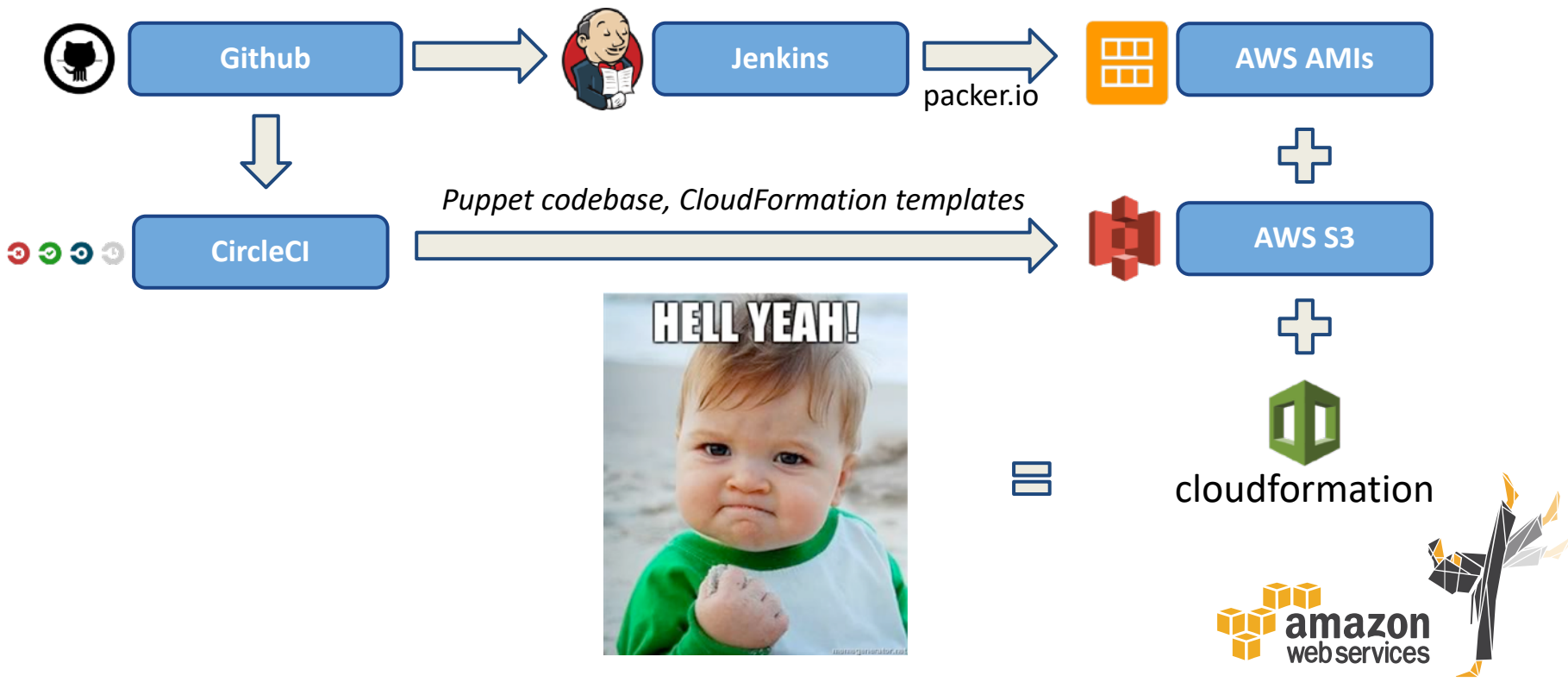


# Our AWS manifesto

- Key objectives : **automation, scalability, safety**
- Continuous integration & delivery on all layers (infrastructure, instances, applications)
- Infrastructure : deep integration with AWS services for maximum leverage
- Applications : use our current stack for now, unless the benefit/cost ratio of adopting an equivalent AWS service is too good to pass (Redshift)
- Move everything, but no big bang : the move will be gradual  
→ plan & build with parallel run in mind (DC + AWS)



# Infrastructure as code : done!



# New challenges ;)

- Some performance & cost trade-off in the short term
- Technical debt (aka « guess what's under the rug? »)
  - Layer 7 load balancing rules (\*evil\*), legacy filters, etc.
  - Servers running really old versions of whatever: keep or reinstall?
  - Any cruft ignored over the years. Time to clean up!
- Parallel run requires good connectivity → AWS DirectConnect
- CloudFront performance not great across regions → need a 2<sup>nd</sup> CDN
- Negotiating early termination of the legacy hosting contract !



# Conclusion

- 5 years ago : «Cloud computing? Why?»
- Now : «NO cloud computing? Why?»
- Some good reasons, but mostly really bad ones
- Cloud computing a fashion? I don't think so.
- Cloud = infrastructure in digital form (like photos, music, movies, money, etc.)
- Using AWS helps Viadeo change every day, by speeding up innovation and delivery
- See you there!

viadeo

Réalisez pleinement votre potentiel  
720 000 recruteurs et chefs d'entreprise à contacter

S'inscrire gratuitement

Vous avez déjà un compte ? Connectez-vous

Mettez votre réseau (et votre futur boss) dans votre poche.

Où que vous soyez, les applications mobiles et tablettes vous accompagnent dans votre vie professionnelle

Logos for App Store, Google Play, and Amazon Appstore are shown at the bottom.

