

# Ensure the advent of PostgreSQL

Think global, Act local

**Jean-Paul Argudo**

Dalibo - [www.dalibo.org](http://www.dalibo.org)

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# Thanks !

Great people makes great events



- ▶ Oleg Bartunov told me about #pgconfr
- ▶ Alexey Slynko & Ivan Panchenko for awesome support
- ▶ LOC and everyone here!

# Jean-Paul Argudo

PostgreSQL geek

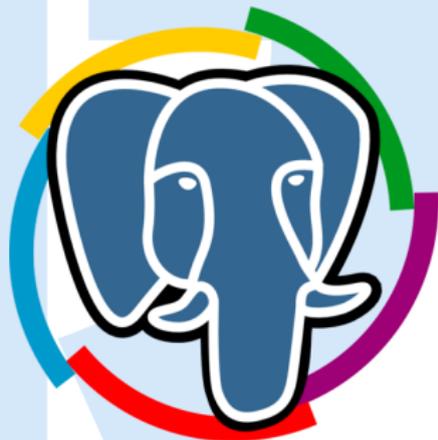
 **DALIBO**  
L'expertise PostgreSQL

- ▶ PostgreSQL.fr founder (2004 →)
- ▶ PostgreSQL Fr non-profit co-founder (2005 →)
- ▶ PostgreSQL Eu non-profit co-founder (2008 → 2013)
- ▶ Founder and CEO of Dalibo (2005 → 2011)
- ▶ Elected CEO of Dalibo cooperative (2012 →)

# PostgreSQLFr

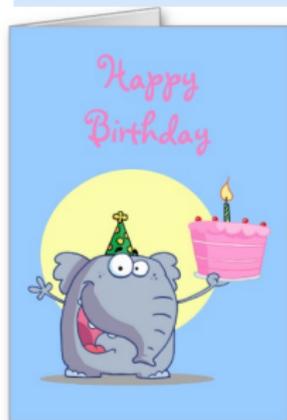
the non-profit for french-speaking countries

- ▶ regroup users and companies
- ▶ helps organizing booths ([Solutions Linux Paris](#))
- ▶ events like [pgDay.fr](#)
- ▶ legal matters (insurance, bank and other administrative things)



Francophony wheel

- ▶ PostgreSQL Expertise, Trainings and Support since 2005
- ▶ PostgreSQL "pure-player"
- ▶ Some tools: [OPM](#), [PoWA](#), [pgBadger](#) and more
- ▶ 20% of working time contributing to PostgreSQL
- ▶ Financial supporter of the PG community ([pgConf.eu](#), [pgDay.fr](#), etc)



10 years!

# Agenda

## Topics covered by my talk

- ▶ Part 1: About PostgreSQL itself
- ▶ Part 2: Building a **local** community
- ▶ Part 3: Business opportunities
- ▶ Part 4: The role of the public sector
- ▶ Part 5: What **you** can do

# PART 1

## Is PostgreSQL good enough?

- ▶ no great product without
- ▶ great users
- ▶ **and vice versa!**

# Early age

up to 2005

- ▶ mostly a learning project
- ▶ how a RDBMS works?
- ▶ Russians were already coding complex things (Vadim Mikheev, MVCC patch)
- ▶ they still do (HINT: Alexander, Oleg, Teodor...)

# Production-ready

2005 → 2009

- ▶ relative stability ...
- ▶ PITR, warm standby
- ▶ better concurrent access and locking
- ▶ Slony-I to replicate the whole database ...

# State-of-the-art

2010 → 2013

- ▶ built-in replication
- ▶ exclusion constraints, partitioning
- ▶ pg\_upgrade
- ▶ extensive PL/pgSQL

# Flexibility

... and more since 2013!

- ▶ top-level SQL (Window functions, CTEs, LATERAL, etc)
- ▶ Foreign Data Wrappers
- ▶ best of both worlds in NoSQL (JSON(B), VODKA, etc)
- ▶ Bi-Direction Replication (BDR)

# A powerfull RDBMS

The most advanced open source database

- ▶ really early to do anything pro with PostgreSQL before 2000's ([Greatbridge PostgreSQL's tragedy](#))
- ▶ became good enough for many usecases in the mid 2000's
- ▶ more than good enough since early 2010's to be used everywhere
- ▶ just better each year on each major version

# Still not convinced?

**Few usecases**

- ▶ 123 centers in France → 11 million families  
→ 63 billion € distributed in 2008
- ▶ 1.5 year migration for +5000 sources
- ▶ 24h data migration
- ▶ 168 databases with partitionning = 4  
Terabytes total (largest database 250 Gigabytes)
- ▶ 1 billion SQL statments **per day**
- ▶ read complete usecase: **english** and  
**french**



# Chorus formulaires

## Governmental invoices and accounting



- ▶ since early 2010 in production (PostgreSQL 8.3!)
- ▶ replaced more than 80 proprietary softwares
- ▶ schema of +500 tables, 230 k lines of code
- ▶ 10.000 simultaneous users, 24/7 (think about distant french islands)
- ▶ read complete usecase: [french](#) (a bit outdated)

# Météo France

## French weather forecast

- ▶ 70% databases under PostgreSQL
- ▶ targets 100% PostgreSQL quickly
- ▶ migrations from Oracle started 10 years ago
- ▶ yet 10 Terabytes in the biggest database
- ▶ about 1 billion tuples in the biggest table
- ▶ read complete usecase: [french on PostgreSQLFr's usecases webpage](#)



Toujours un temps d'avance

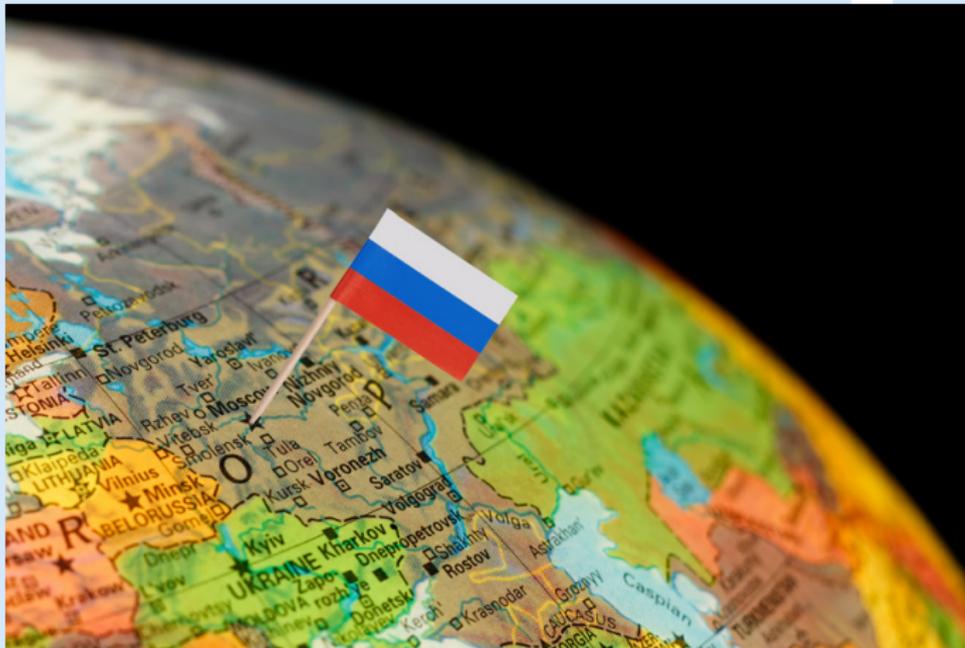


**leboncoin.fr**

- ▶ **7 most visited in France**, full PostgreSQL
  - ▶ 250M page views / day
  - ▶ 5M unique visitors / day
  - ▶ 18M UV / month (1/3 french people)
  - ▶ 600K+ new ads / day
  - ▶ 25M live ads
- ▶ 100+ PostgreSQL servers on 20 machines
- ▶ 8 Terabytes of data
- ▶ **read complete usecase:** [english](#)

# PART 2

## Create a local community



- ▶ sure you can
- ▶ you can also review patches and discuss on [mailing-lists](#)
- ▶ ... but there are lots of things you can do
- ▶ **specially if you don't code.** I'm a great example. Trust me<sup>1</sup>

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<sup>1</sup>[ 33813.919975 ] hello\_world[2]: segfault at 0

# Already there

## PostgreSQL global resources

- ▶ [mailing-lists](#): historical, still of great usage
- ▶ [wiki](#): new and powerful tool in the project
- ▶ [planet PostgreSQL](#): blog aggregator you must read
- ▶ [IRC](#), [twitter](#) and many more

- ▶ to share knowledge
- ▶ local mailing-list can help but:
  - ▶ 287 users on [pgsql-fr-generale](#) (308 on [pgsql-ru-general](#))
  - ▶ about 4000 users on [forums.postgresql.fr](#)
- ▶ usecases are important for hesitating people
- ▶ saw lots of PostgreSQL Russian websites → make a portal?

# Translate (please)

Local for sure!

- ▶ PostgreSQL is a database → hard to learn
- ▶ difficulty: official documentation is in english
- ▶ **translate everything!** is a solution
- ▶ example of [docs.postgresql.fr](https://docs.postgresql.fr) (tsearch powered!)
- ▶ French version of documentation was **mandatory** for French Government's PostgreSQL adoption!<sup>2</sup>

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<sup>2</sup>because most of the people in ministries don't speak or read english ...

# Local speaks local

protectionism by the language

- ▶ living local open source ecosystems relies on local language
- ▶ when nothing is translated, the market is then open for global companies

# Local group

**Role: filter from global to local differences**

- ▶ neutral organization to regroup users, companies and research
- ▶ promotes locally where needed
- ▶ in short, makes PostgreSQL locally visible and known

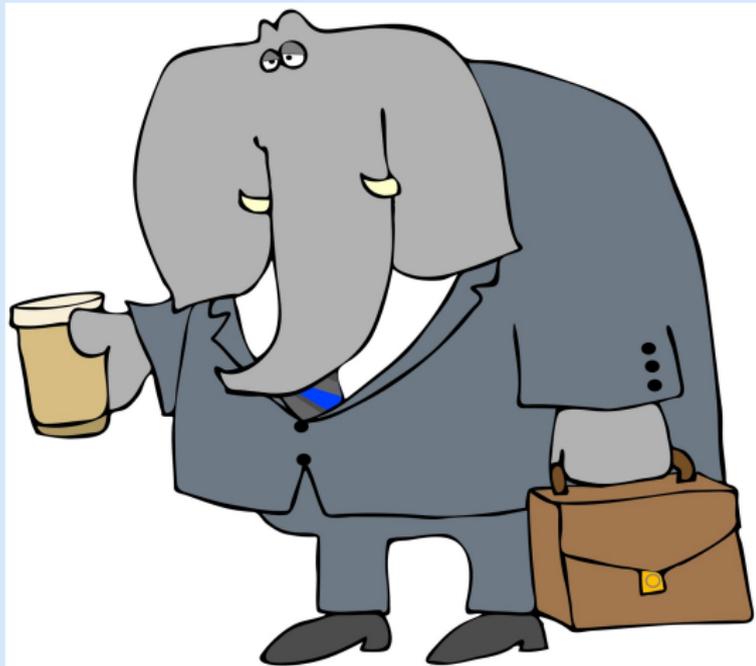
# Events

Online is good, In real life (IRL) is better

- ▶ allows speakers to spread the news around
- ▶ but also between participants
- ▶ please let time and space for them to share things
- ▶ [#PostgreSQLRussia meetup](#), pgConf.Russia 2015!

# PART 3

## Business



# PG is for business

**At least, business decides ...**

- ▶ RDBMS-es runs business everywhere !
- ▶ we must talk business like business people<sup>3</sup>
- ▶ technicians will love PostgreSQL. We all do here.
- ▶ but technicians rarely decide

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<sup>3</sup>Yes, I wear suit and tie sometimes ...

# Open Source is Free

**But surely not free of charge**

- ▶ calculate Return On Investments (ROI) simply
- ▶ compare actual known Total Cost of Ownership (TCO) with
  - ▶ one-time costs: studies, trainings, industrialization and migration
  - ▶ recurring cost of support: easy with PostgreSQL (per instance mostly)
- ▶ a well known PostgreSQL Company's job

# Too expensive?

The smaller, the cheaper

- ▶ sometimes migrating costs are prohibitive
- ▶ all depends on the stored code to migrate ([Ora2Pg](#) to estimate migration costs...)
- ▶ trust "the PostgreSQL effect"
  - ▶ make things smaller but working
  - ▶ and let time do its job

# Key benefits

Migrating is for money, but also ...

- ▶ **no more vendor lock-in** but
  - ▶ a professional offer, complete and versatile
  - ▶ a cutting-edge RDBMS for developpers
  - ▶ a vibrant, living community

# Coopetition

**Competitors that Cooperate == coopetitors**

- ▶ basic principle: same recipes, but different chefs → different flavors
- ▶ we're NOT Oracle: more actors, more choice → better offers
- ▶ → there's room for everyone here. More to come with growing market shares!
- ▶ → [PostgreSQL.org sponsors page](#) list them

# Pure player ?

## How to identify a PostgreSQL pure player

- ▶ a comprehensive Open Source offer
- ▶ supports Open Source solutions whenever possible
- ▶ transforms a wide part of the income into contributing back to the community
- ▶ as a bonus, the governance is readable and assumed

# Hi demand

PostgreSQL DBAs are hard to find

- ▶ PostgreSQL professional training → most important thing
- ▶ the demand is already high and growing
- ▶ one of the worst threat to the PostgreSQL advent
- ▶ → PostgreSQL Company to train people
- ▶ → community driven actions to learn PostgreSQL in universities

# Tools

**No adoption without tools!**

- ▶ a standard DBA wants to manage PostgreSQL servers
- ▶ but also monitoring, statistics, backup tools and so on
- ▶ → need for a complete stack of tools
- ▶ → extremely active field in the last 2 years!

# Regular business?

## Keypoints

- ▶ no license costs
- ▶ maintenance costs → **real support** contract with **added value**
- ▶ only a support contract gives recurring money
- ▶ two golden rules
  - ▶ just do a **great job** at a **decent price**
  - ▶ customers don't pay to get problems solved, **they pay to avoid problems**

# Ready to start ?

**OK. But start BIG**

- ▶ it's easier if you're not alone
- ▶ the support platform is critical
- ▶ keep the offer simple and readable
- ▶ keep the knowledge and trainings up-to-date

# PART 4

## Public sector



**“I suppose I’ll be the one  
to mention the elephant in the room.”**

# Show the way

**Public sector can help in many ways!**

- ▶ money-driven too (economic crisis): addressed with same arguments
- ▶ but also: independence and secrecy
- ▶ finally: a way to support local eco-system, made of small and mid-size companies
- ▶ ... rather than throwing public money away into global companies

# Plans to be done

**Government has to organize and plan things**

- ▶ nominate a special group to study Open Source market
- ▶ find business partners, evaluate needs
- ▶ identify communities, active and dead projects
- ▶ elaborate a list of recommendations to be followed
- ▶ specify Open Source technologies as mandatory in public markets

# Make guidelines

## Political commitment

- ▶ Write and spread a strong commitment.  
French gov:
  - ▶ sept. 2012: [Circulaire Ayrault](#) (prime minister) on Open Source
  - ▶ may 2013: [SILL 2013](#) (working station)
  - ▶ feb. 2014: [SILL 2014](#) (servers)

(SILL: the inter-ministerial free software base)

# Ayrault's letter

## The Prime Minister's letter

*Le Premier Ministre*

5608/SG

Paris, le 19 septembre 2012

à

*Mesdames et Messieurs les ministres*

**Objet : Orientations pour l'usage des logiciels libres dans l'administration**

### **6.2.2.3. MimBD**

Domaine :

- ensemble des logiciels de base de données.

Missions spécifiques :

- favoriser la migration des bases propriétaires vers des bases libres, et en particulier PostgreSQL.

# Funding

## Public money as a contribution

- ▶ locally, thanks to special research programs
- ▶ globally, acting inside wider groups, for example, European Union's Seventh Framework Program aka "FP7"
  - ▶ [AXLE Project](#) as an example

# Give us a chance

## To enter public markets

- ▶ trainings and support are great area for public markets
- ▶ do some specific rules for Open Source ([french example](#) about intellectual property clauses)
- ▶ give PostgreSQL companies a chance, with well sized public markets
  - ▶ don't make "global open source markets" because only big companies can answer...
  - ▶ prefer "PostgreSQL markets" where PostgreSQL pure-players can answer !

# France (1/2)

## French PostgreSQL adoption

- ▶ still a lot of work to do!
- ▶ lots of people trained, training and to train
- ▶ multiple contacts with multiple actors in an over-hierarchal government
- ▶ we discover new (or old!) PostgreSQL projects each months

# France (2/2)

More to come with french gov

- ▶ next "SILL" will come out 2015 or 2016
- ▶ PostgreSQL will be mandatory in any circumstances
- ▶ still waiting a "PostgreSQL only" public market
- ▶ competitors will offer their best, gouvernement will choose!

# PART 5

## What YOU can do



# Speak

Tell the world what YOU do with PostgreSQL

- ▶ just tweet \*NOW\* → "Did I tell you I'm an happy PostgreSQL user?!"
- ▶ tweet again about whatever you like about PostgreSQL (©Simon Riggs at pgConf.eu 2014 Madrid)
- ▶ blog your PostgreSQL usage
- ▶ write a complete usecase to create a new reference

# Publish

You did something great with PostgreSQL?

- ▶ give something back to the community publishing your creations
- ▶ like others already did
  - ▶ Skype'tools aka [Skytools](#) (walmgr, PgQ and Londiste, etc)
  - ▶ [Zalando's tools](#) for PostgreSQL (PGObserver, java wrapper, etc)

# Contribute

get a "PostgreSQL Staff" polo and ...

- ▶ participate in PostgreSQL booths or events
- ▶ answer questions online or IRL
- ▶ help organizing if you're not into technique
- ▶ teach PostgreSQL in schools (where everything starts)
- ▶ jump on the [pgsql-advocacy](#) mailing-list

# You're a pro?

Things your company can do for us

- ▶ you can sponsor events or non-profits groups
- ▶ you can sponsor specific developments you need
  - ▶ "jfg networks" ([Over-blog](#) platform) sponsored Oleg's and Teodor's work on GIN Index
  - ▶ that was cheaper and smarter than buying special proprietary software!
- ▶ you can directly hire a PostgreSQL developer, or have people coding PostgreSQL in your team!

# Ask for support

**You're not alone!**

- ▶ there are now many existing non-profit groups to help you
- ▶ a wide group of valuable speakers around the globe
- ▶ logistics (for booths or events)
- ▶ finances (lending or paying for things)

# Conclusion

## Ensure the advent of PostgreSQL locally

- ▶ PostgreSQL **is great**
- ▶ Acting **locally** in a global community
- ▶ **Pure players** have huge opportunities
- ▶ **Political decisions** must be done, government must show the path
- ▶ **Nothing will be done without you:** start what you want ...
- ▶ ... but **start it TODAY**

Questions?

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