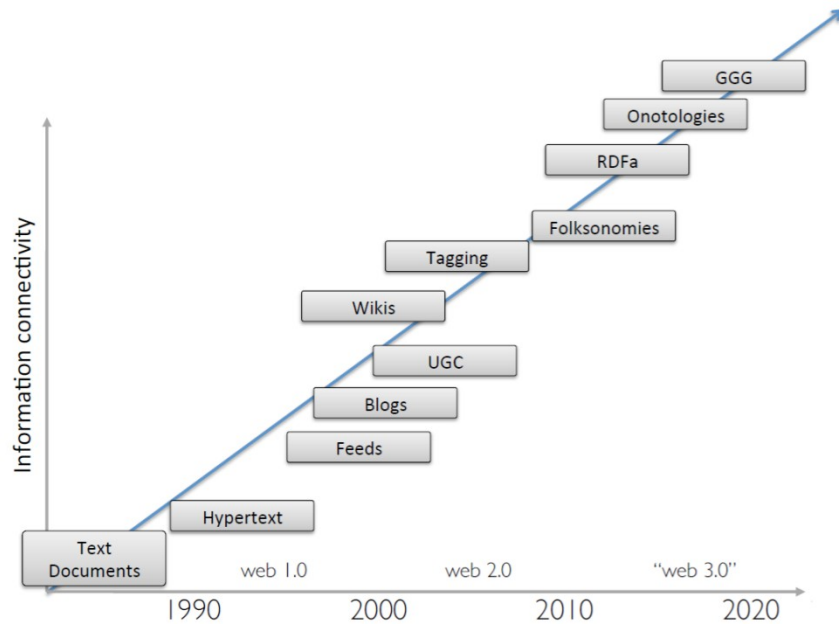

Acces aux bases de donnees :
quelles clés ?

■

■

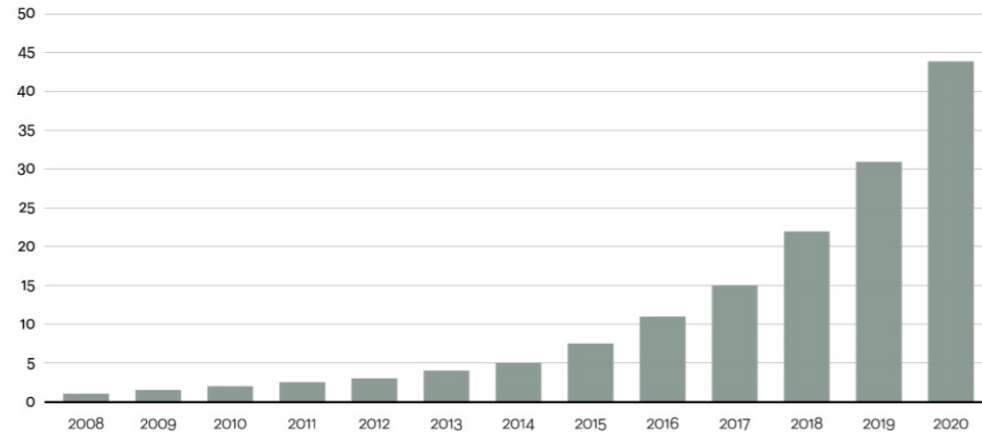
présenté par Thuy et Wilfried

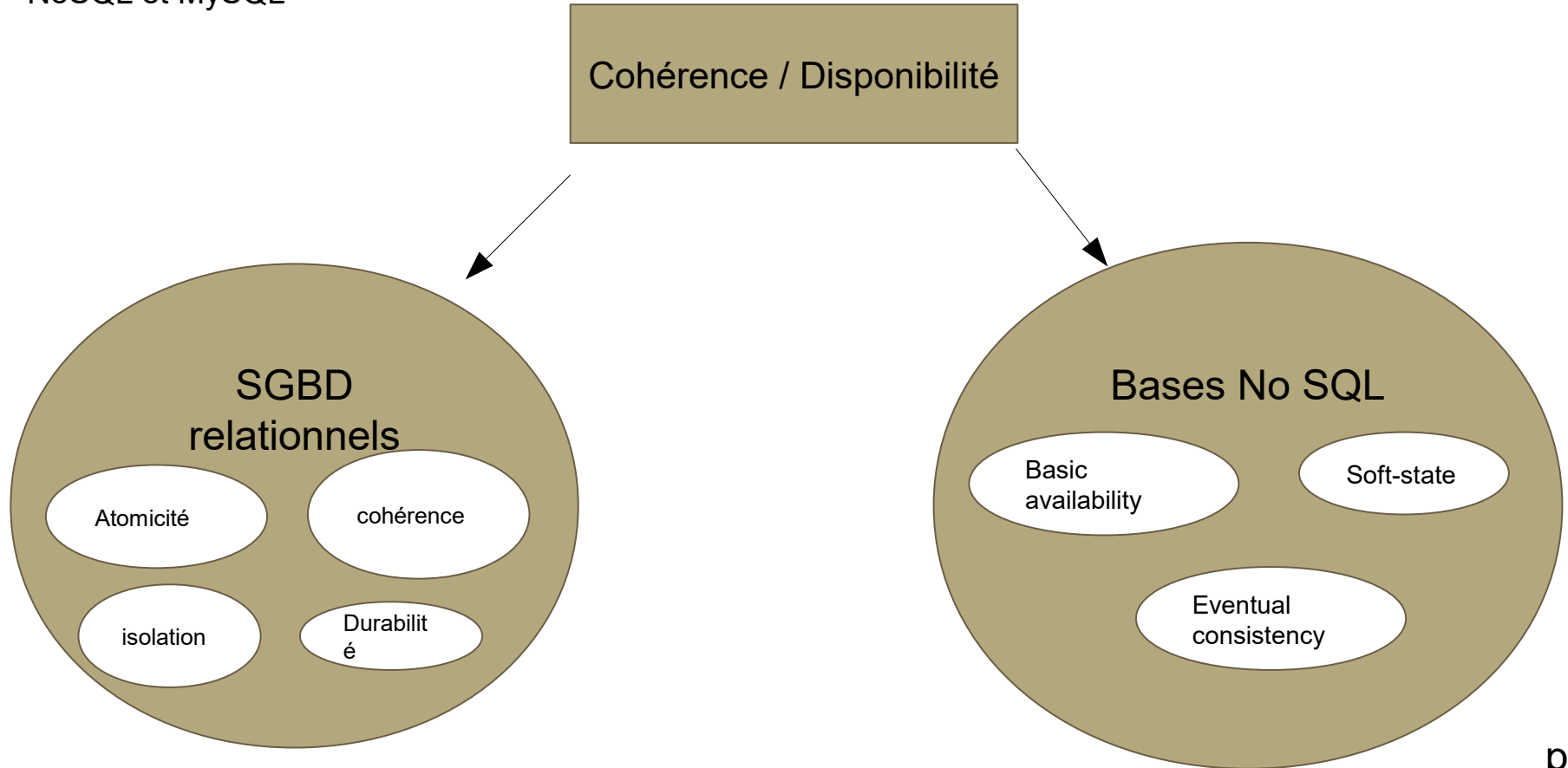
Introduction



Data is growing at a 40 percent compound annual rate, reaching nearly 45 ZB by 2020

Data in zettabytes (ZB)









Object Relational Mapping

Intérêts:

- Pas de SQL dans le code
- Indépendance vis à vis de la base de données

web framework	None	Flask	Flask	Django
ORM	SQLAlchemy	SQLAlchemy	SQLAlchemy	Django ORM
database connector	(built into Python stdlib)	MySQL-python	psycopg	psycopg
relational database	 SQLite	 MySQL	 PostgreSQL	 PostgreSQL

Data Mapper Pattern vs Active Record Pattern

```
c = Contact()           # création d'un nouveau contact
c.nom = "Guido Van Rossum" # affectation des champs
c.tel = "06 01 02 03 04"
c.save()                # Ecriture dans la base
```

```
session = create_session() # Création d'une session
```

```
c = Contact()           # Nouveau contact
c.nom = "Guido Van Rossum" # affectation
c.tel = "06 01 02 03 04"
```

```
session.add(c)           # ajout du nouveau contact
session.commit()          # validation de la transaction
```

Object Relational Mapping avec précaution

- Non concordance
- Réduction de performance
-

Ressources

-<https://www.sqlalchemy.org/>

-<https://www.fullstackpython.com/object-relational-mappers-orms.html>

-<https://python-guide-pt-br.readthedocs.io/fr/latest/scenarios/db.html>

-http://camillepradel.fr/teaching/nosql/NoSQL_cours.pdf

-<https://blog.ippon.fr/2017/12/19/coherence-ou-disponibilite-des-donnees-quels-elements-de-choix-d/>

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<https://cloud.google.com/datastore/docs/articles/balancing-strong-and-eventual-consistency-with-google-cloud->