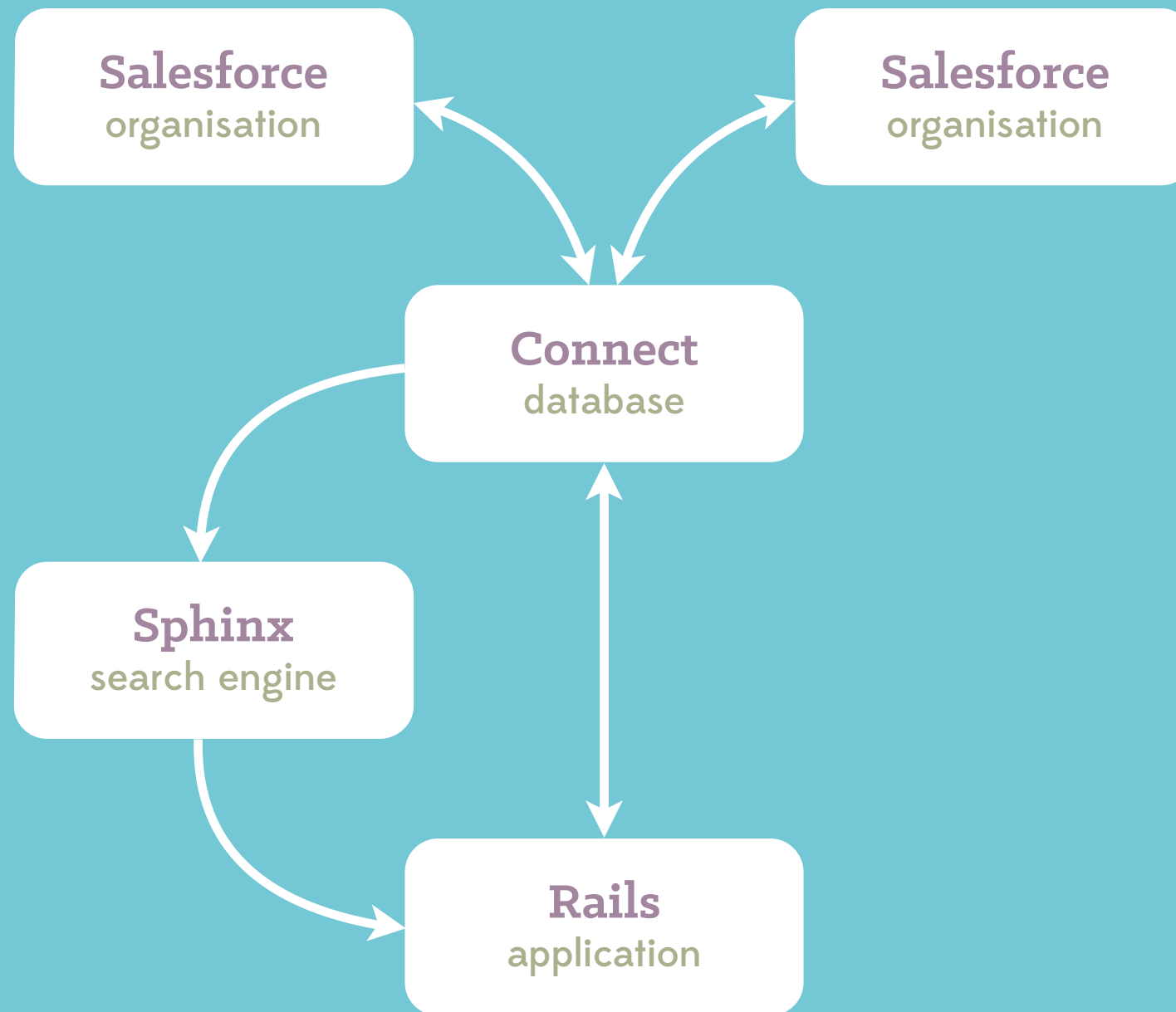# INTRODUCTION
Who am I?

Rob Anderton

★ Co-founder of TheWebFellas

★ Technical Architect and Senior Developer

★ Ruby, Rails, JavaScript, Sphinx, AWS

INTRODUCTION
The project

Salesforce
organisation

Salesforce
organisation

Connect
database

Sphinx
search engine

Rails
application

TECHNOLOGY
Heroku Connect

★ Synchronises data between Salesforce and Heroku platforms

★ Provides point and click configuration of data mappings

★ Separates Salesforce integration from application code

TECHNOLOGY
Sphinx

★ Open source full text search engine

★ Fast and flexible

★ Works directly with Heroku Postgres data

TECHNOLOGY
Ruby on Rails

★ Web development framework

★ Sphinx integration using Thinking Sphinx

★ Flying Sphinx add-on for Heroku

IMPLEMENTATION
Connect mappings

★ **New!** Heroku Connect Demo Edition

★ Free to use with some limitations
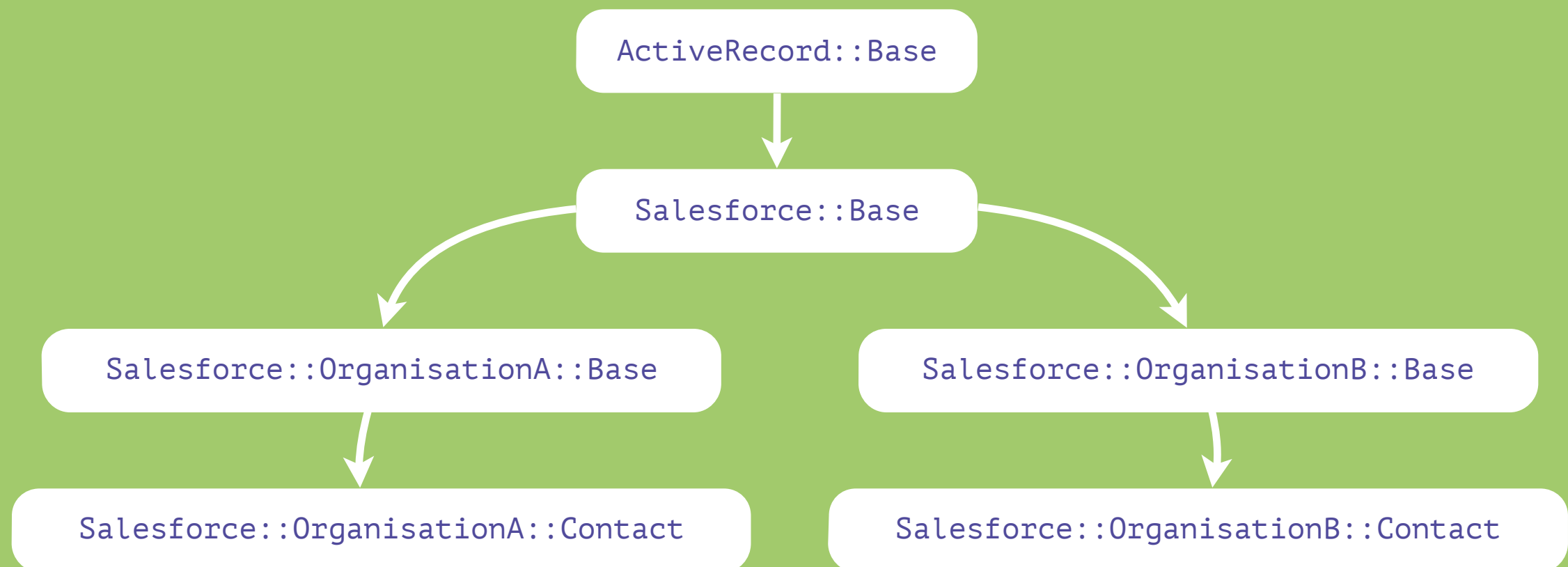
★ Free Salesforce Developer Edition organisation

```
$ heroku addons:add herokuconnect:demo

$ heroku addons:open herokuconnect:demo
```

IMPLEMENTATION
Rails models

★ No code required for Salesforce integration

★ ActiveRecord models much like any other

★ Use namespaces to organise code

```
ActiveRecord::Base
        │
        ▼
   Salesforce::Base
   ┌──────┴──────┐
   ▼             ▼
Salesforce::OrganisationA::Base    Salesforce::OrganisationB::Base
   │                                   │
   ▼                                   ▼
Salesforce::OrganisationA::Contact    Salesforce::OrganisationB::Contact
```

IMPLEMENTATION
Sphinx integration

★ Flying Sphinx add-on for Heroku

★ Client libraries for Ruby, Rails, Python & Node.js

★ Handles configuration, indexing and search

★ Hosted service running on AWS

★ Multiple pricing plans for different usage requirements

```
$ heroku addons:add flying_sphinx:wooden
```

IMPLEMENTATION
Indexing data

★ Define indices for models using Thinking Sphinx

★ Index the data using Flying Sphinx

```ruby
ThinkingSphinx::Index.define 'salesforce/organisation_a/contact', with: :active_record do

  indexes email
  indexes firstname, as: :first_name
  indexes lastname, as: :last_name
  indexes title

  indexes [ lastname, firstname ], as: :name, sortable: true

  where sanitize_sql([ 'isdeleted = ?', false ])

end
```

```
$ heroku run bundle exec flying-sphinx index
```

IMPLEMENTATION
Searching data

★ Thinking Sphinx provides powerful DSL for search

★ Supports filtering, sorting, pagination and more

★ Global search across multiple indices

★ No code required for Salesforce integration

```
Salesforce::OrganisationA::Contact.search('bob')
=> # Returns Contacts from Organisation A that match 'bob'

ThinkingSphinx::Search('bob')
=> # Returns matches from any index that match 'bob'
```

FURTHER WORK
Delta indexing

- ★ Sphinx index has to be periodically rebuilt

- ★ Large datasets take time to process

- ★ Delta index only contains updates

- ★ Handled transparently by Sphinx

- ★ Flying Sphinx provides delayed delta support

FURTHER WORK
Delta indexing

★ Custom fields in Connect mapping table

★ Custom triggers to handle updates from Salesforce

★ Wrapper models in Rails for custom metadata

★ Need to research and define best practice

SUMMARY
Seamless Salesforce integration

★ Heroku Connect makes it easy to work with Salesforce data

★ Multiple organisation support

★ No need to spend time writing complex integration code

★ Postgres database allows other tools to interact with data without awareness of Salesforce

★ Developers can focus on their applications

THANKS

TAM Team

- ★ Peter Braswell
- ★ Mike Jerome
- ★ Andy Macdonald
- ★ Niklas Richardson
- ★ Phil Ripperger

Connect Team

- ★ Margaret Francis
- ★ Scott Persinger
- ★ Marc Sibson

THE END
Any questions?

Try the app

https://rob-anderton-starter-project.herokuapp.com

View the code

https://github.com/rob-at-thewebfellas/heroku-connect-search