Making mistakes with **GraphQL**

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Impraise | Lisbon GraphQL
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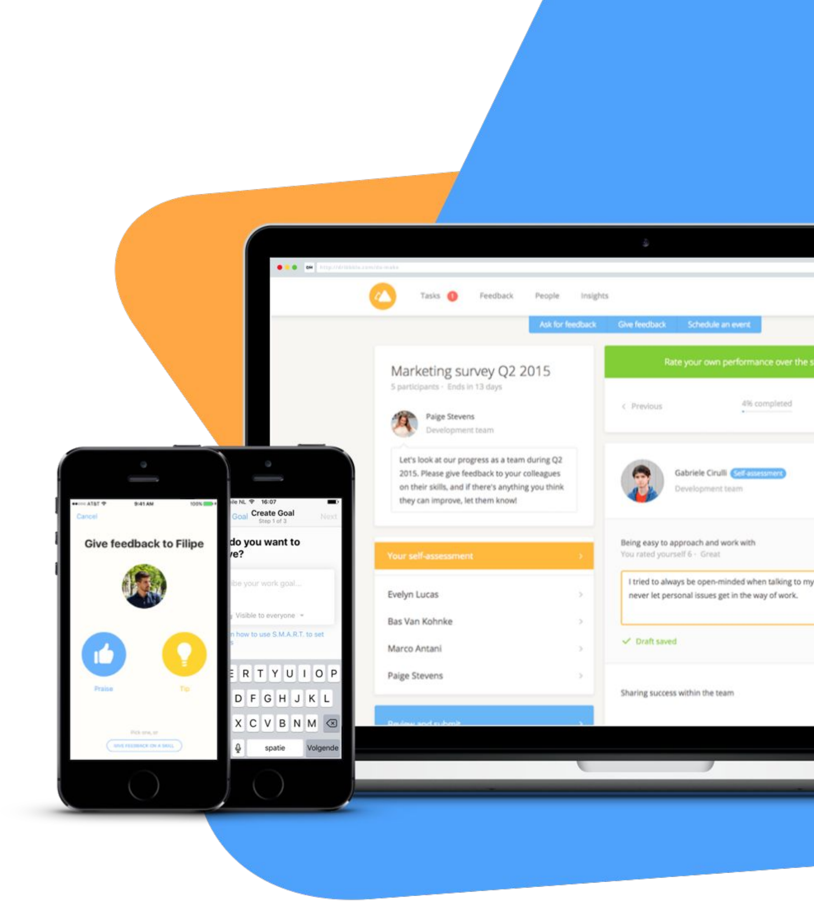
Impraise

Who are we?



Let's look at our progress as a team during Q2 2015. Please give feedback to your colleagues on their skills, and if there's anything you think they can improve, let them know!

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Thiago von Sydow

Senior backend developer
Github: ***@thiago-sydow***

GraphQL @ *Impraise*

Cool. but why?

Why GraphQL?

Why take the gamble?

- Multiple clients to support with different requirements
- Endpoints became overloaded with options
- Some endpoints were duplicated
- Specific client/customer requests that led to “single use case” endpoints -> we needed flexibility

I HAVE NO IDEA WHAT I'M DOING
DANGER!
PICK ONE

Returning HTTP error codes with empty responses

Just read the spec and apply it.

- Both can cohabit for a little bit while the clients adapt:
  - Keep returning the HTTP error code
  - Return the normal GraphQL response with the “errors” entry
- When a significant % of users have updated their clients, remove the HTTP error codes from the response, and just return a “200 OK”.

Choosing a collection pattern early

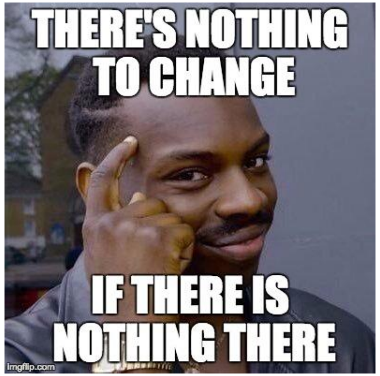
Decide early if you want to be relay-compatible

- Clients already using the id (database key)
  - Can’t *just* change to Global IDs
  - Clients have to update to use a new id field. Only after we can implement Global IDs
- Multiple fields returning collections but with different pagination patterns
  - Use savy timing for deprecation, and *communicate* about it to all concerned teams

Poor early schema design

...but if you really want to change it

- Remove all unused nodes from the graph



- Add deprecation warnings to all nodes that do not make sense, and build up the schema from there

Poor early schema design

Spend time as a team building your initial GraphQL schema

- Stop thinking in endpoints ASAP
- Check out these **Github** threads:
  - *facebook/graphql#175*
  - *facebook/graphql#134*

The Graph is your friend!

(but it will get messy)

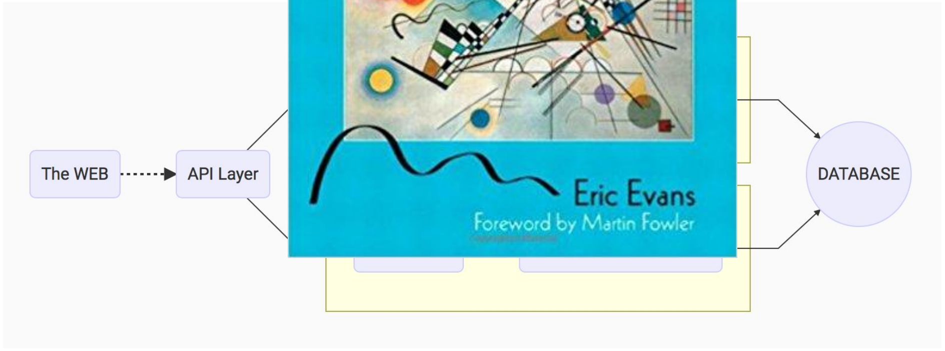
A few good things we’ve done

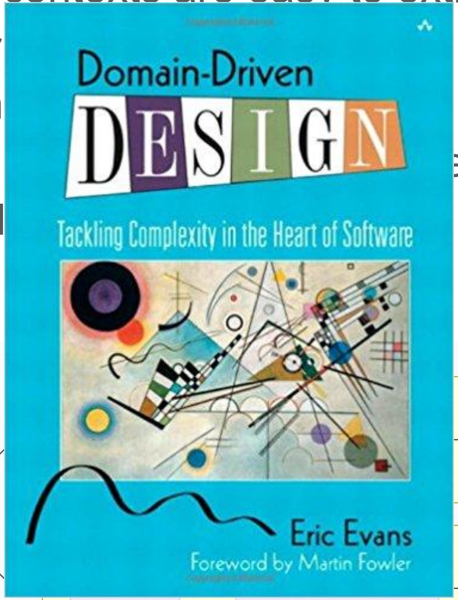
We can’t make only mistakes (can we?)

Domain Driven Design

Allowing the monolith to scale

- Bounded contexts are easy to extract to
  - Inter
  - Stan
  - And ernal API I




Domain-Driven
DESIGN
Tackling Complexity in the Heart of Software
Eric Evans
Foreword by Martin Fowler

Domain Driven Design

Allowing the monolith to scale

- A place for everything, and everything in its place
  - Easier debugging
  - Easier testing (isolation)
  - Less moving pieces
  - Easier team scaling

How we approach things now

Trying to be neat AF

- Have a **clear separation** between the API layer and the domain layer
- As few Rails as needed. Be a Ruby developer first (language > framework)
- The graph (API layer) is **based** on the **designs**

Field authorization

Leveraging instrumentation

```ruby
module Graph
  class FieldAuthorization
    def instrument(_type, field)
      [...]
      resolve_proc = authorization_proc(field)

      field.redefine do
        resolve(resolve_proc)
      end
    end

  private

    def authorization_proc(field)
      [...]
      ->(obj, args, ctx) {
          [...]
          policy = permission[:policy_class].new(ctx[:current_user], promise_result)
          raise GraphQL::ExecutionError, :forbidden unless policy.send(permission[:action])
          [...]
        end

        resolved
      }
    end
  end
end
```

Field authorization

Leveraging instrumentation

As simple as writing:

```ruby
field :organization do
  type OrganizationType
  description "Lookup an `Organization` by id"
  access_permission(policy_class: OrganizationsPolicy, action: :load?)
```

Questions?

Any feedback is also welcome

Oh, and if you want to make GraphQL mistakes with us:

Impraise (*Amsterdam* or *Lisboa*) is looking for :

- **Ruby** developers
- **Front-end** developers (React, Apollo, Redux)
- **DevOps** animals
- **Mobile** developers (iOS and Android)

Send us your CVs

at bertrand@impraise.com

or thiago@impraise.com

Obrigado!

Check us out at impraise.com