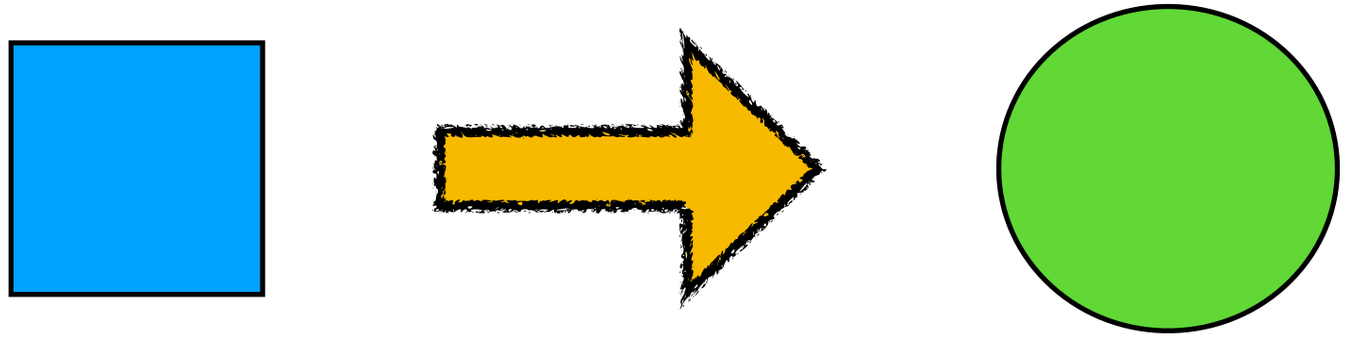
DSpace 7 Projections

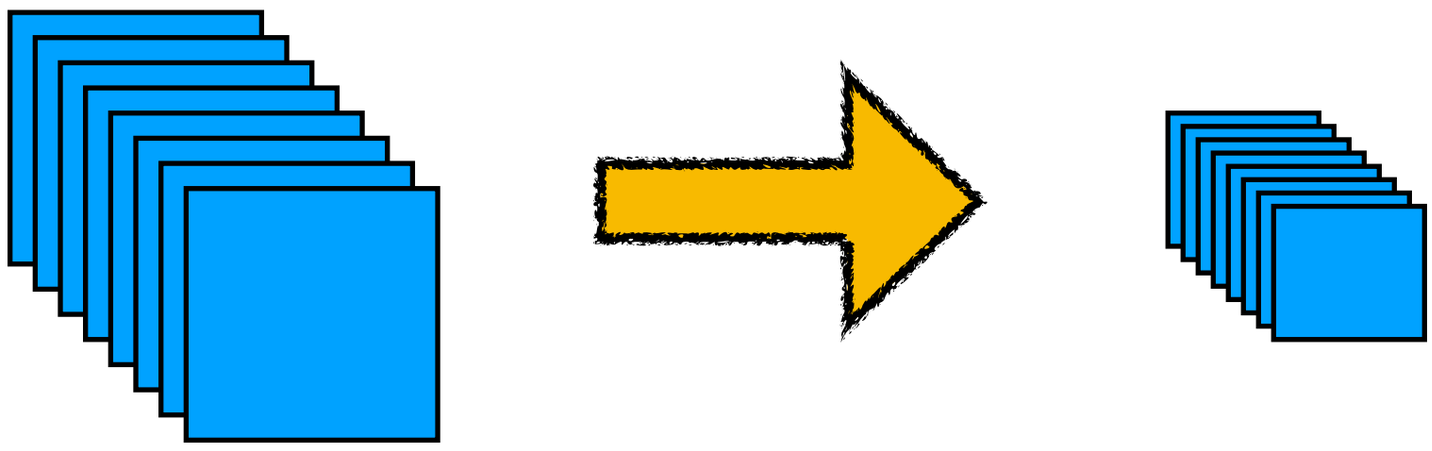
Where they fit and what's been done.
From DSpace 7 WG meeting, Oct 17, 2019

Projections vs Excerpts

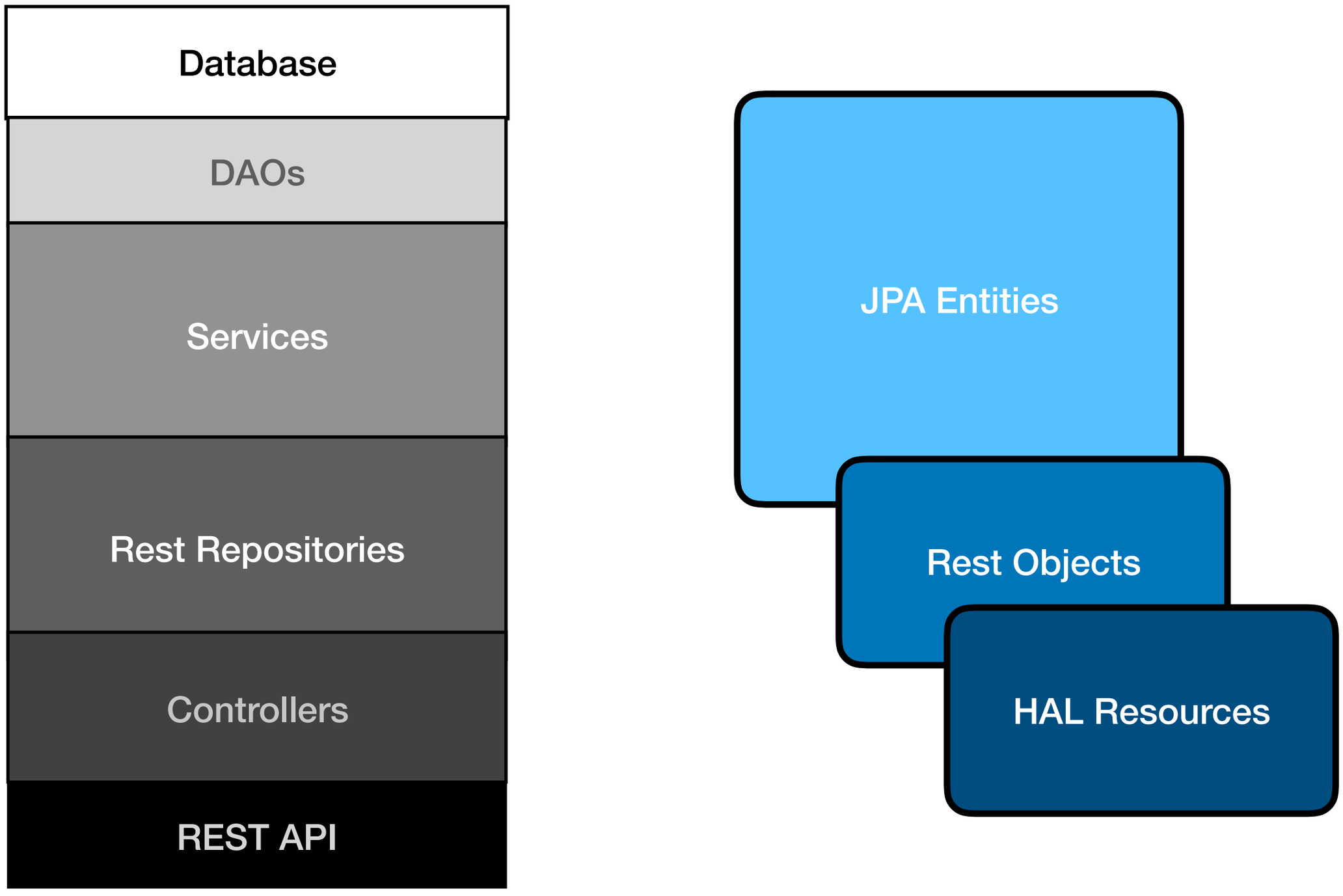


- **Projection**: An altered view of the domain model

- **Excerpt**: An automatic projection applied to a collection



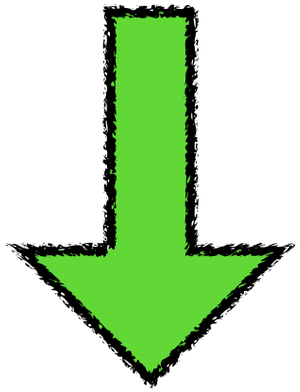
Object scope



Object lifecycle

JPA Entity

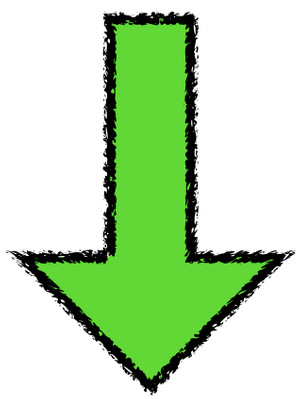
Model Conversion
- converts properties



- Type-specific Converters
- Mostly from Repositories
- Sometimes from Converters

Rest Object

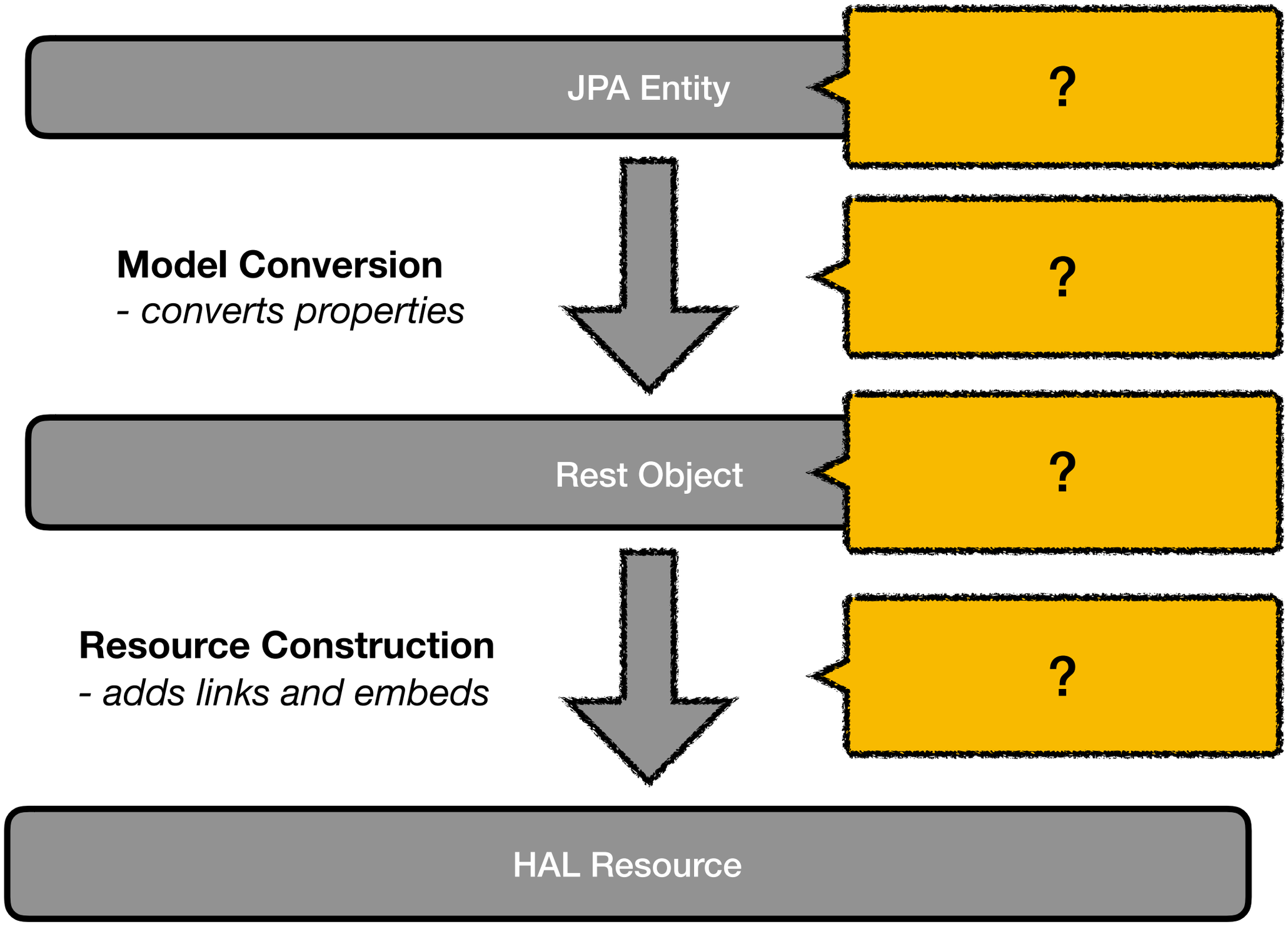
Resource Construction
- adds links and embeds



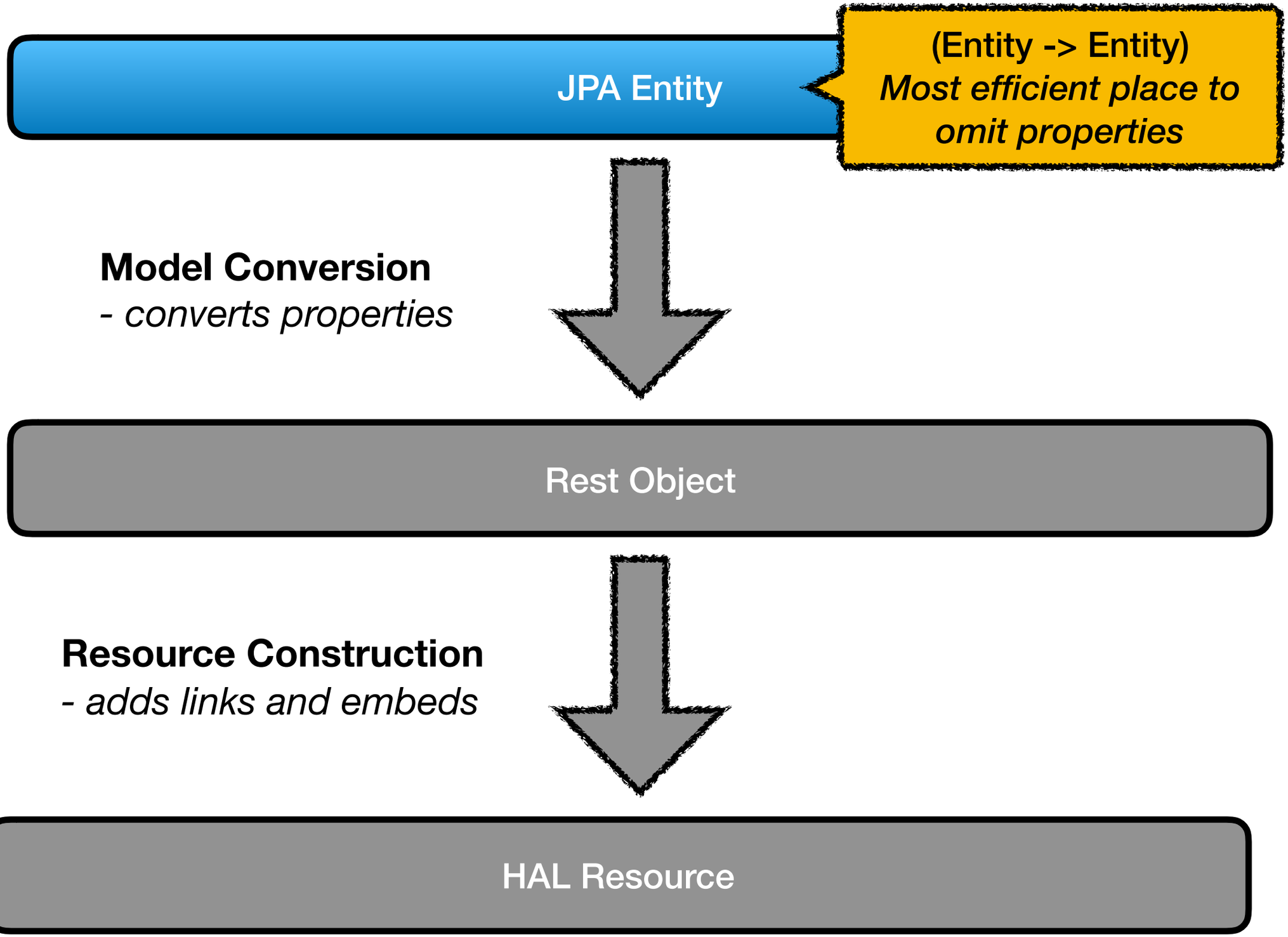
- Type-specific Resources
- Mostly from Repositories
- Sometimes from Controllers

HAL Resource

Where do projections fit?



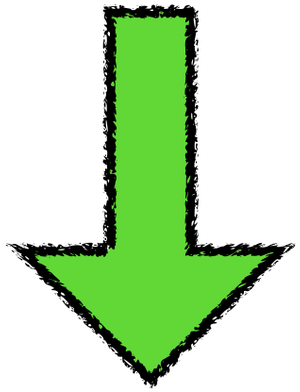
1. Before conversion



2. During conversion

JPA Entity

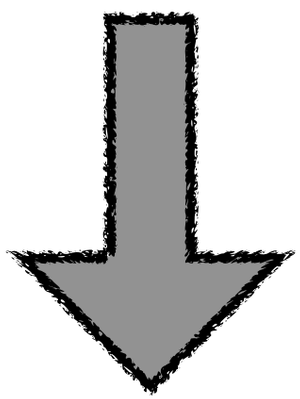
Model Conversion
- converts properties



(Entity->Rest)
Highly flexible, but could get messy

Rest Object

Resource Construction
- adds links and embeds



HAL Resource

3. After conversion

JPA Entity

Model Conversion
- converts properties

Rest Object

(Rest -> Rest)
Easy place to add properties

Resource Construction
- adds links and embeds

HAL Resource

4. During resource construction

JPA Entity

Model Conversion
- converts properties

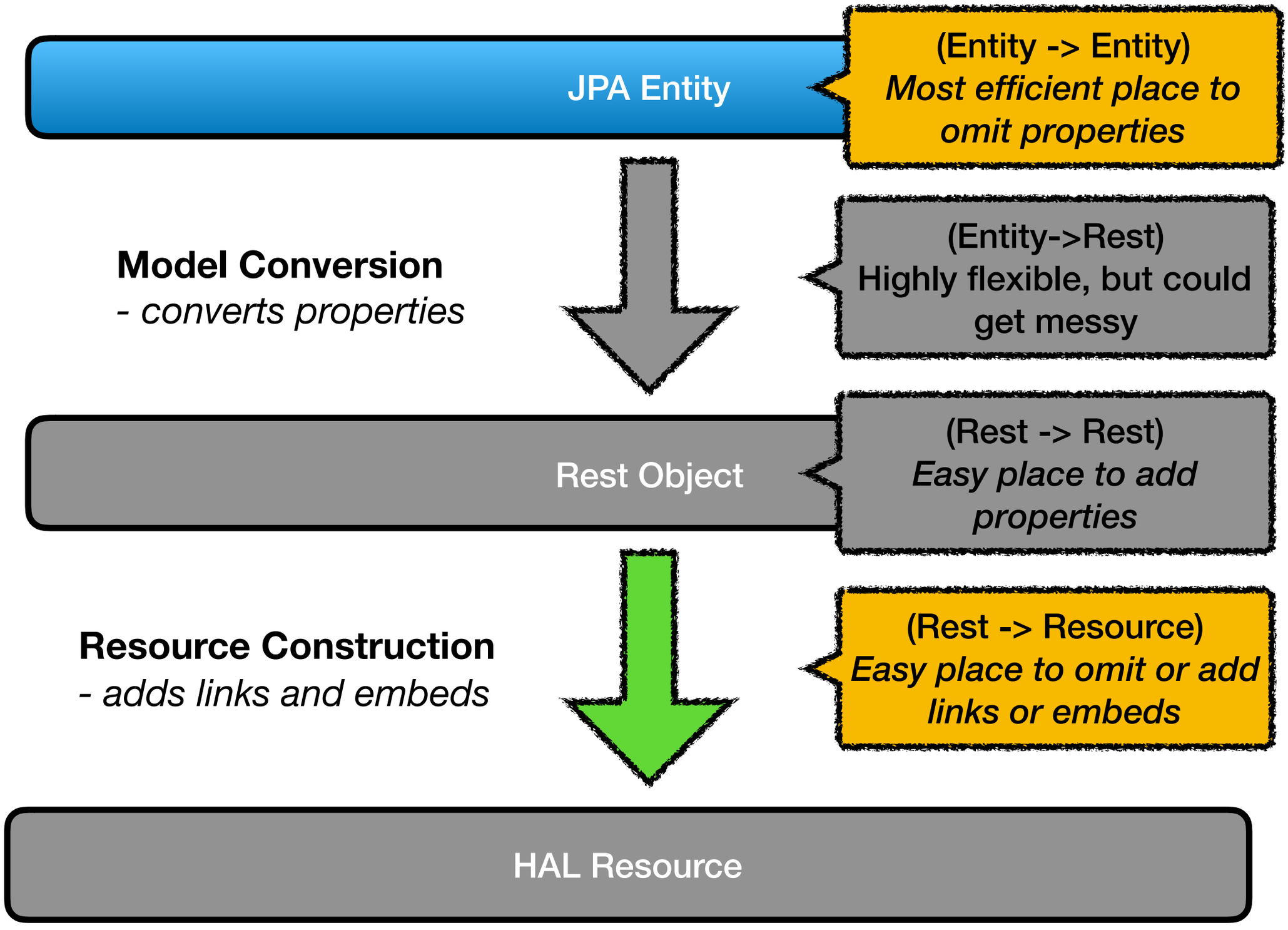
Rest Object

Resource Construction
- adds links and embeds

(Rest -> Resource)
Easy place to omit or add links and embeds

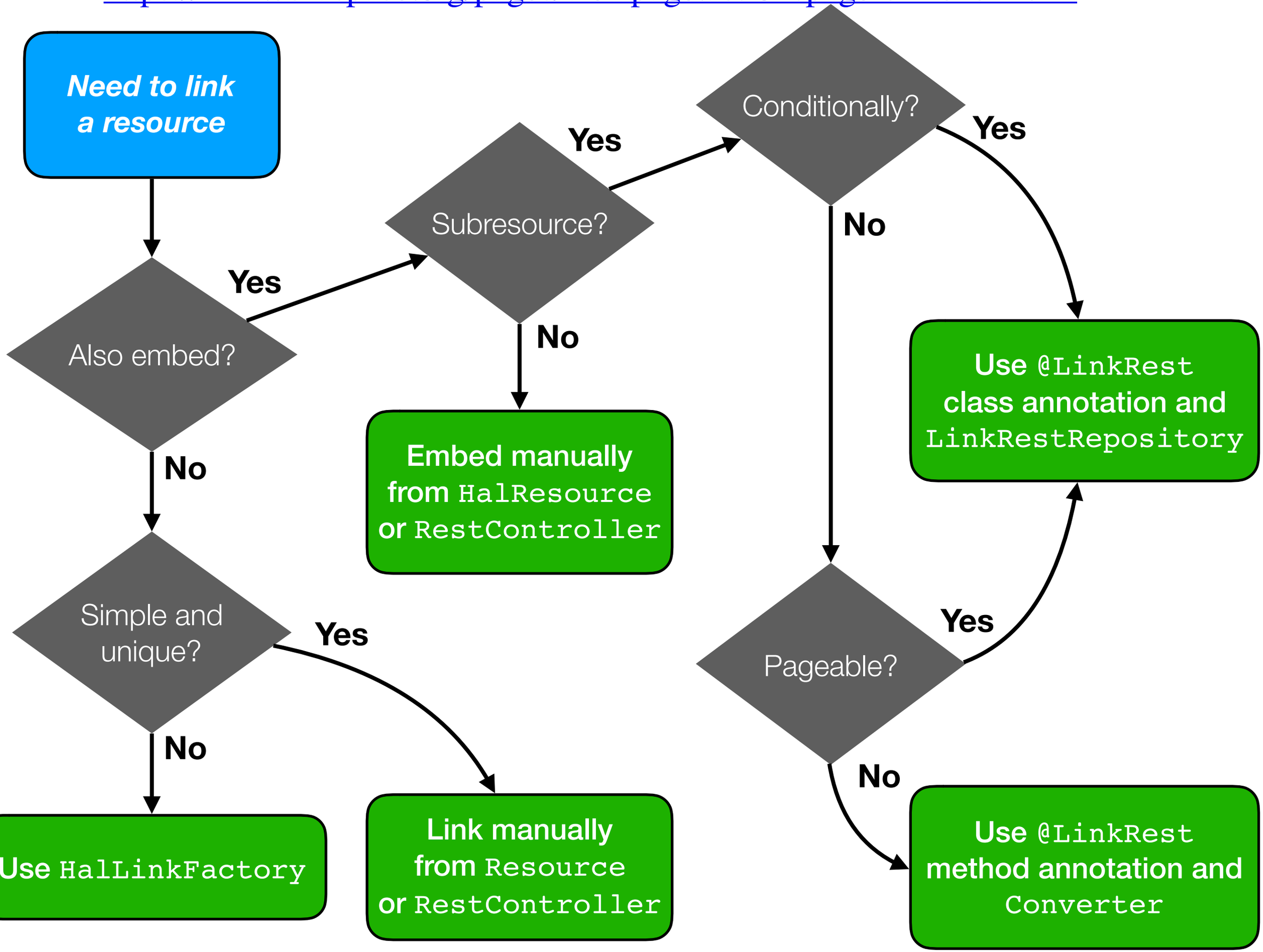
HAL Resource

What's been done



Recommendation: Use Link Repositories for anything that returns a list

- More efficient than using a property on the Rest class
  - see notes in RestResourceController.findRelInternal
- Allows for late embedding
- Will make it easy to opt-out of including that data in certain projections (the "list" excerpt projection).

Feedback Wanted:

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