Location is central to our product.

Let’s model it as data.

Team Data

Location is more like annotation.

Let’s make it metadata.

Team Metadata

What is happening ?!?!?!!

End User

Data, Metadata, and the Ship of Theseus

Ontology modeling concepts to diagnose IA issues

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IAC24

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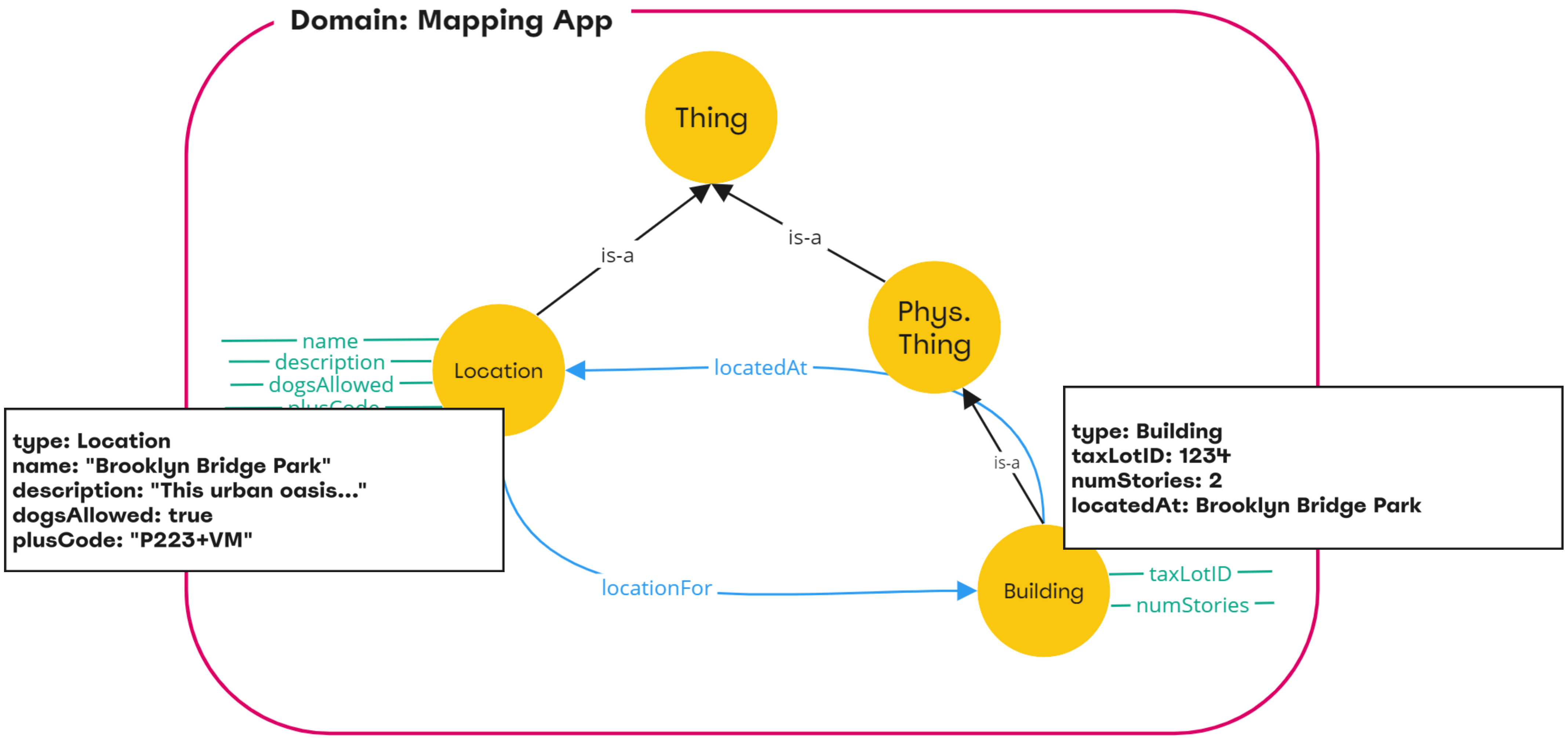
Ontology: a model of the entities in a domain, their attributes, and the relationships between them.

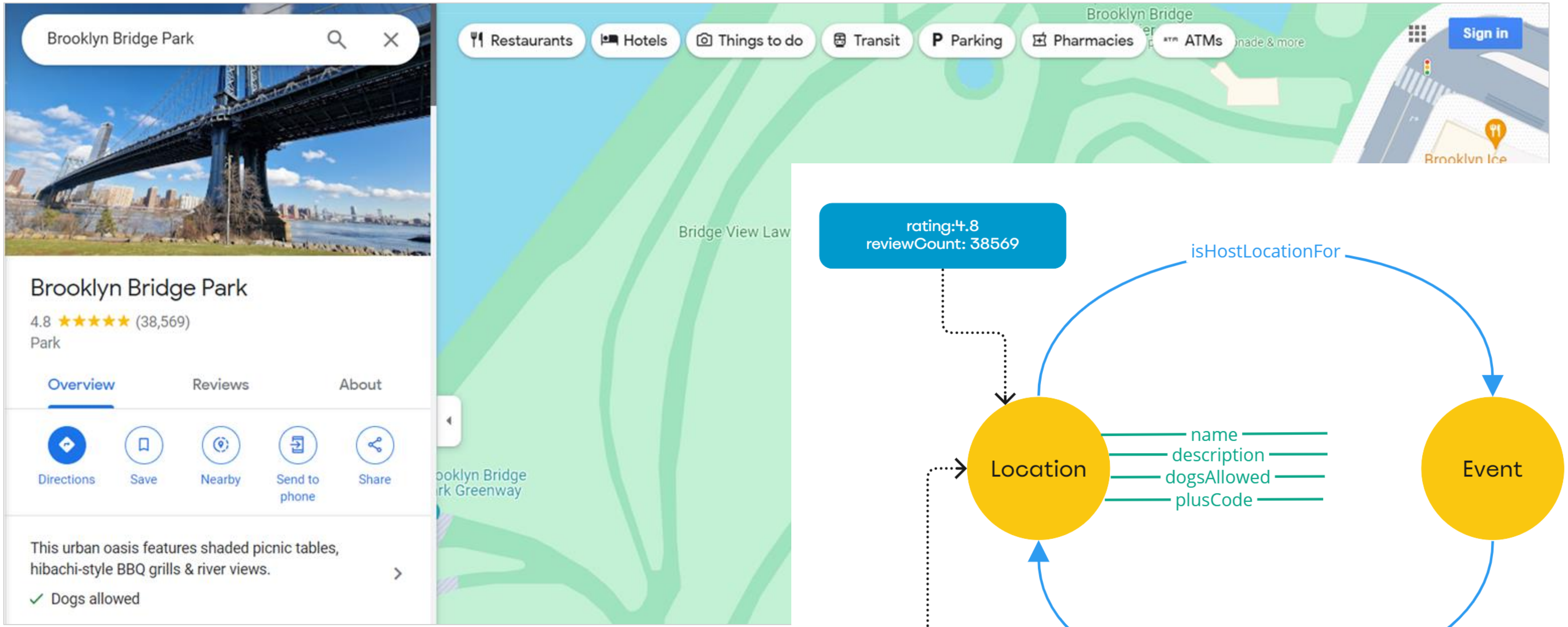


type: Location
name: "Brooklyn Bridge Park"
description: "This urban oasis..."
dogsAllowed: true
plusCode: "P223+VM"

type: Building
taxLotID: 1234
numStories: 2
locatedAt: Brooklyn Bridge Park

Ontology gives us precision tools for unraveling semantic confusion.

Metadata is data about data
within the context of a specific system.


Brooklyn Bridge Park

Restaurants | Hotels | Things to do | Transit | Parking | Pharmacies | ATMs

Sign in

Brooklyn Bridge Park

4.8 ★★★★★ (38,569)

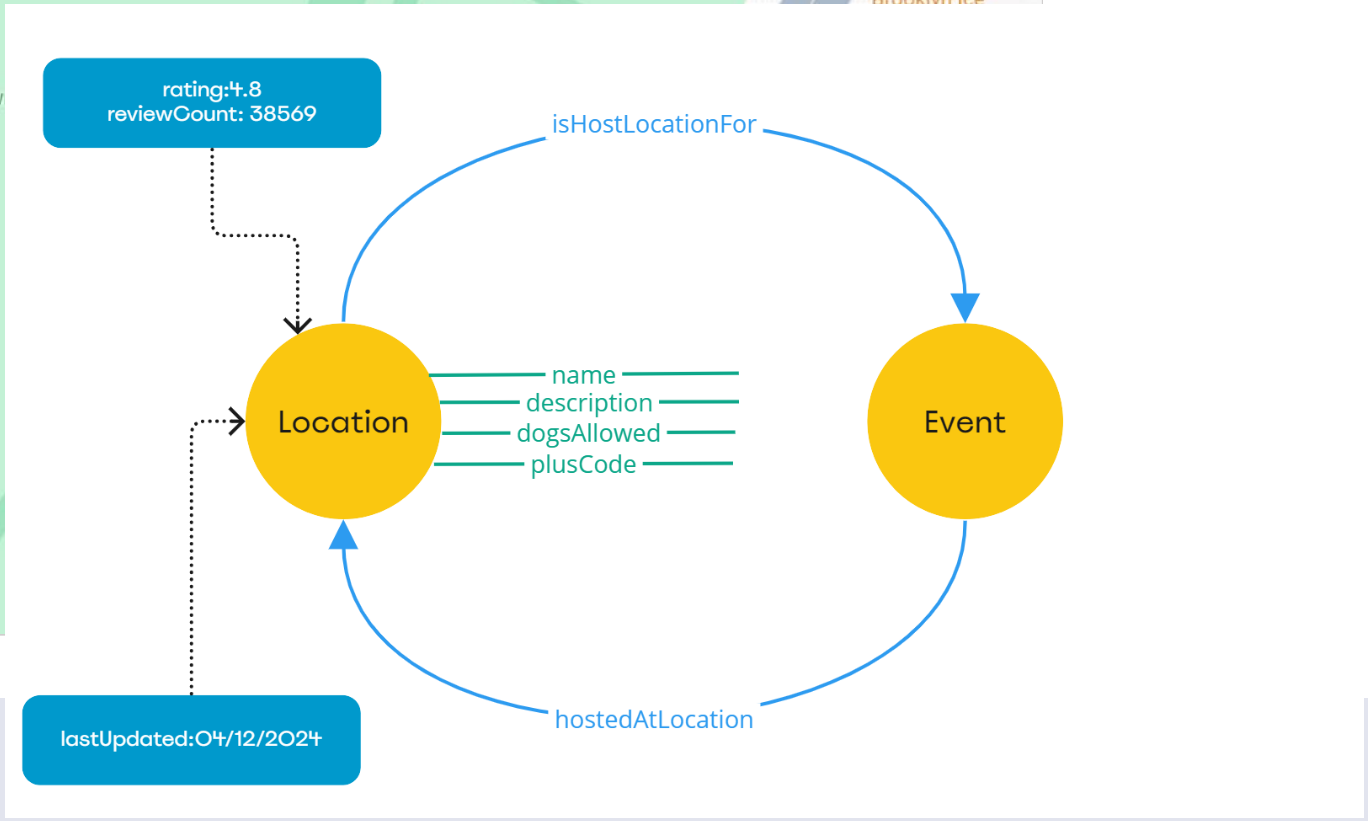
Park

Overview | Reviews | About

Directions | Save | Nearby | Send to phone | Share

This urban oasis features shaded picnic tables, hibachi-style BBQ grills & river views.

✓ Dogs allowed



Mapping app: Location as data

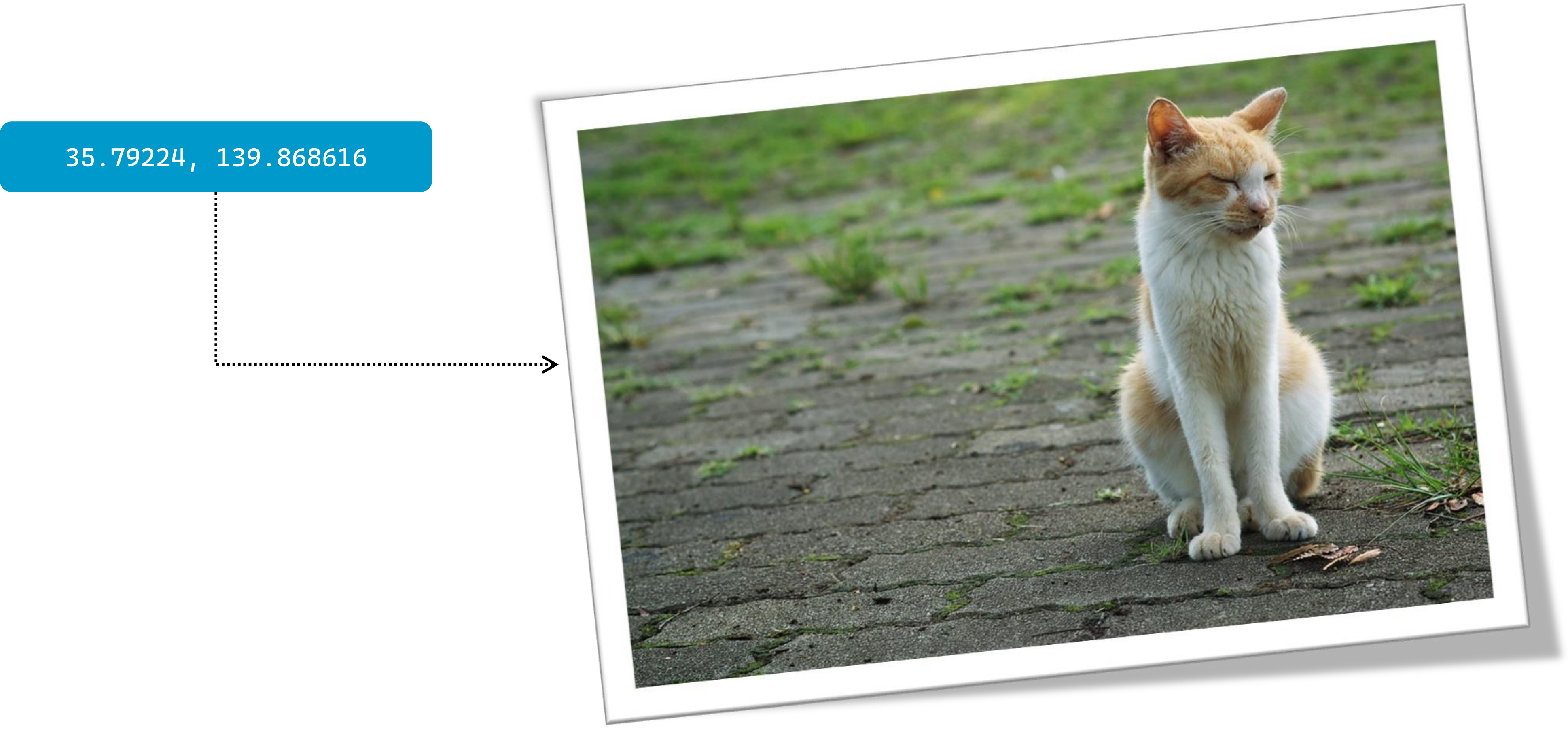
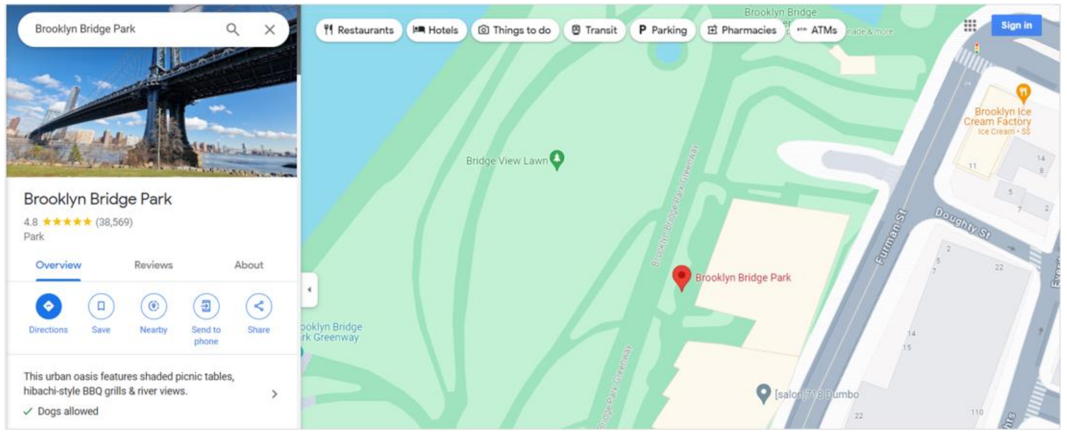


Photo app: Location as metadata

Ontological commitment: the bounds of the model



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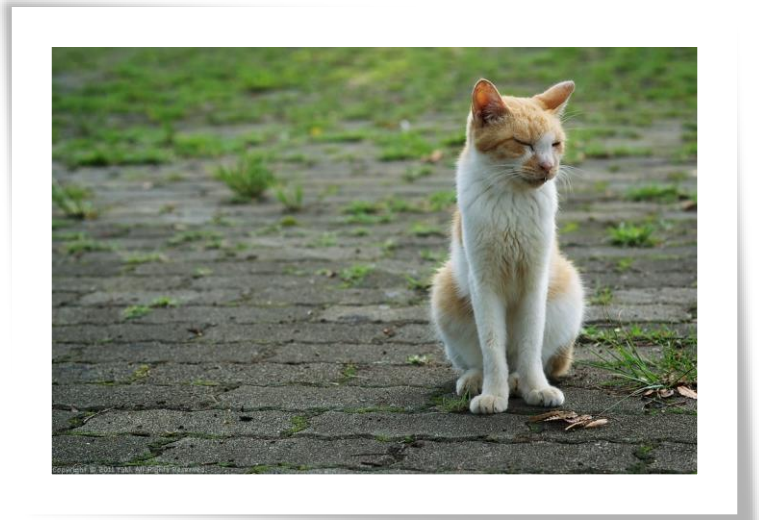


Location and route are fundamental to the map's model.

A photo app's model doesn't require subjects or locations.

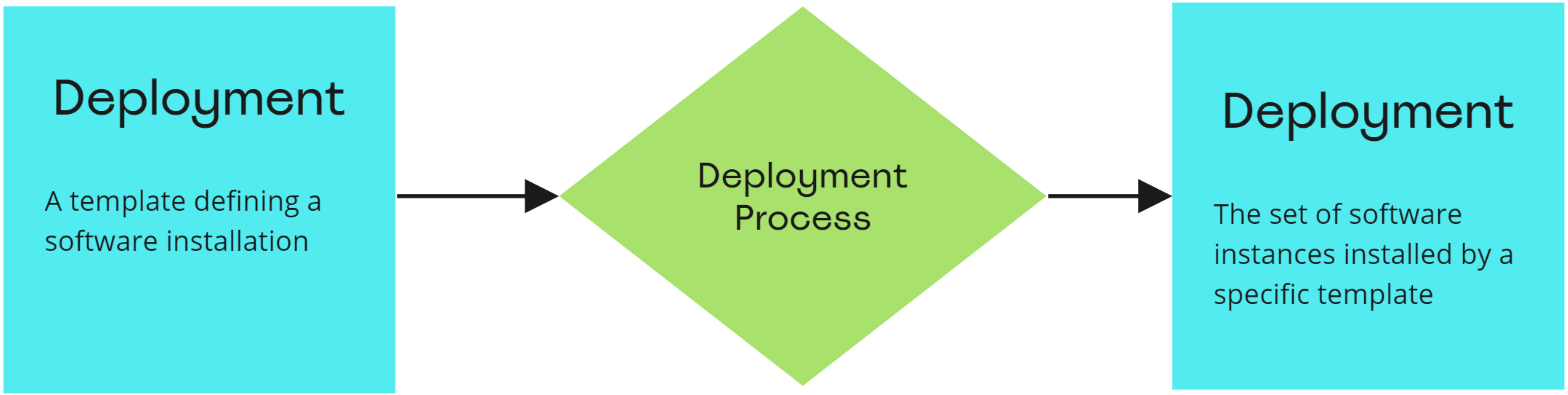
Competency questions: does your model satisfy its users' information needs?

A method for determining ontology commitment.

Competency questions
reframe the question of what should
be modeled as data.

data	metadata	
✓	✓	How many total locations are in the system?
✓	✓	How many items are associated with this location?
✓	✗	What is this location’s geographical boundary?
✓	✗	How many sub-locations does this location contain?
✓	✗	When was this location entered in the system?

To support our information needs,
location should be data.

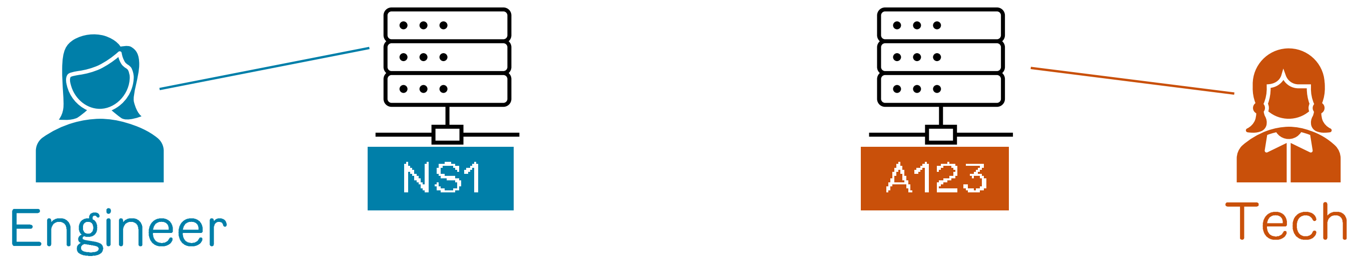

Deployment
A template defining a software installation
Deployment Process
Deployment
The set of software instances installed by a specific template

The Ship of Theseus Paradox

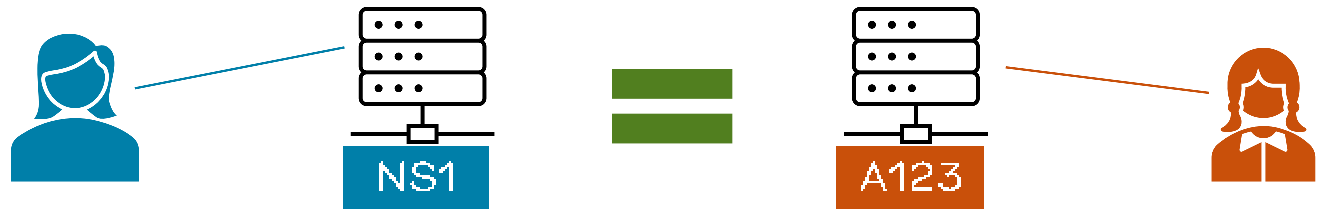
Does identity arise from the parts of a thing?
Or from the thing itself?

The parts and the whole have different relationships to time.

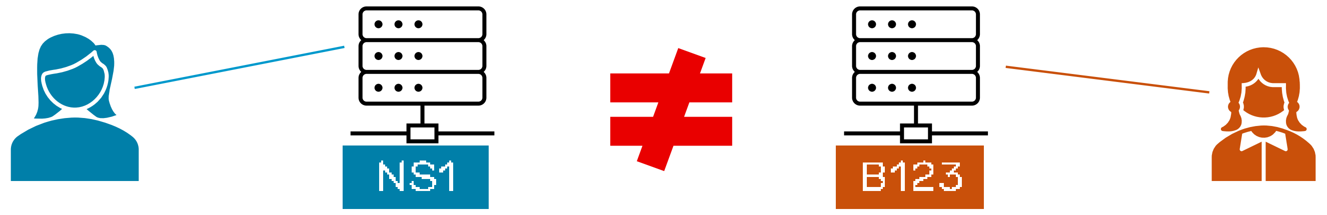
The Paradox in Action



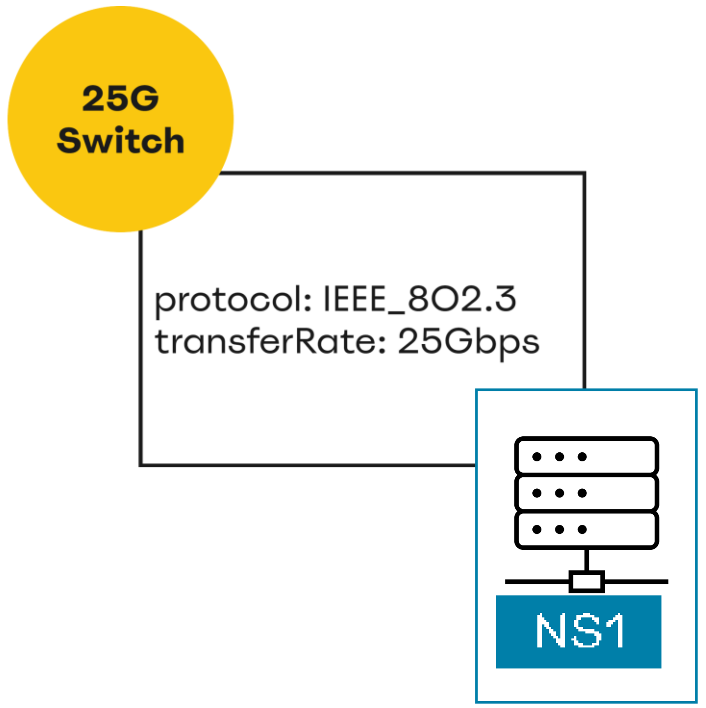
The engineer thinks of the switch in terms of its role in the network. The tech thinks of the actual component fulfilling that role.

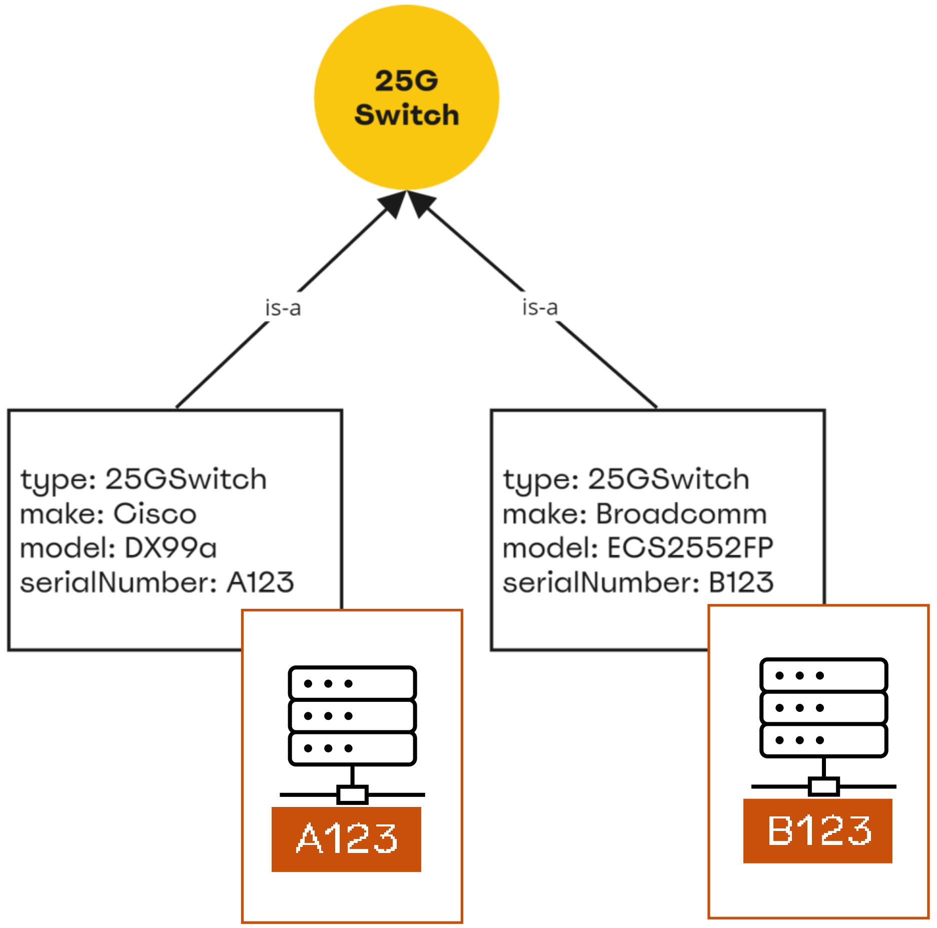


They agree they’re talking about the same physical thing. It seems like they just have different names for it.



When the physical component is swapped, they no longer agree on identity.



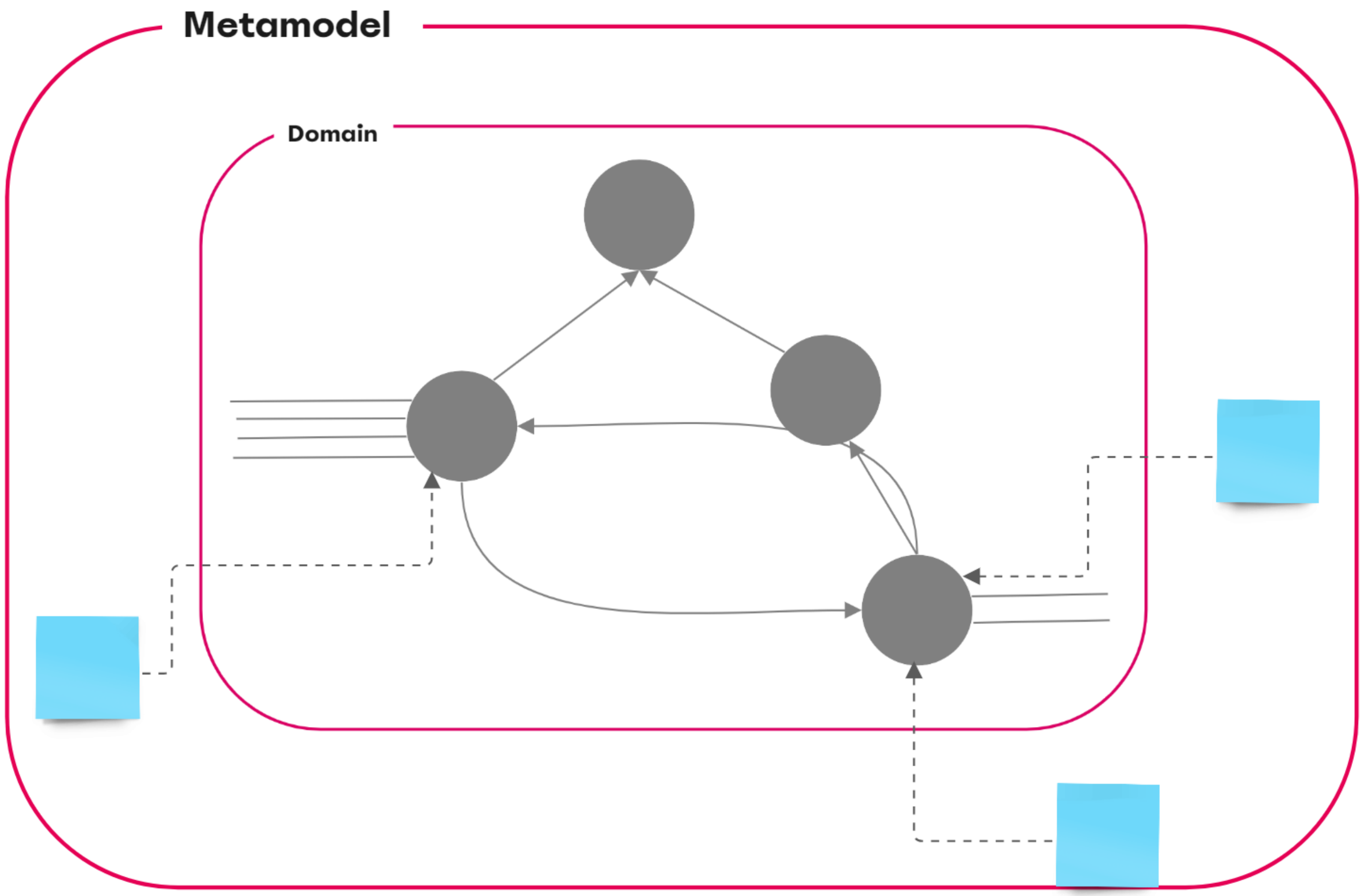


We need to treat the conceptual thing as **both** an instance and a container

Humans switch between these representations seamlessly.

When we transfer that ambiguity to our systems we run into trouble.

Metamodeling

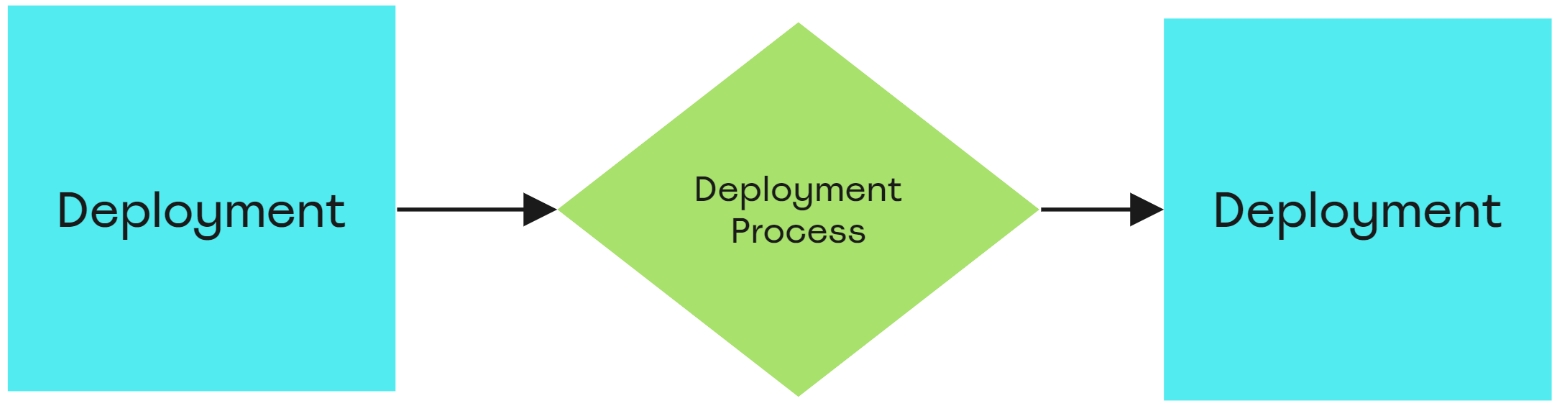


We can’t resolve the paradox.
We can recognize the pattern.

Watch for templates and blueprints.

Pay attention to time.

Watch for transitions.



Model instances early to uncover inconsistencies.

OOUX method: create instances as you create your model.

Even better: workshop attributes and instances with stakeholders.

Handling the Pattern – Examples

1. Rename the instance
2. Ignore it! (For now)
3. Worst-case scenario

COUGAR ACE

Critical in systems concerned with identity

What About the Robots?

Thank you, IAC!

And thanks to the many colleagues who helped me create this talk.

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