

ARCHITECTURE WITHOUT ARCHITECTS

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Popular and “winning”?

Agile & XP

MVC

OOP

Open Source

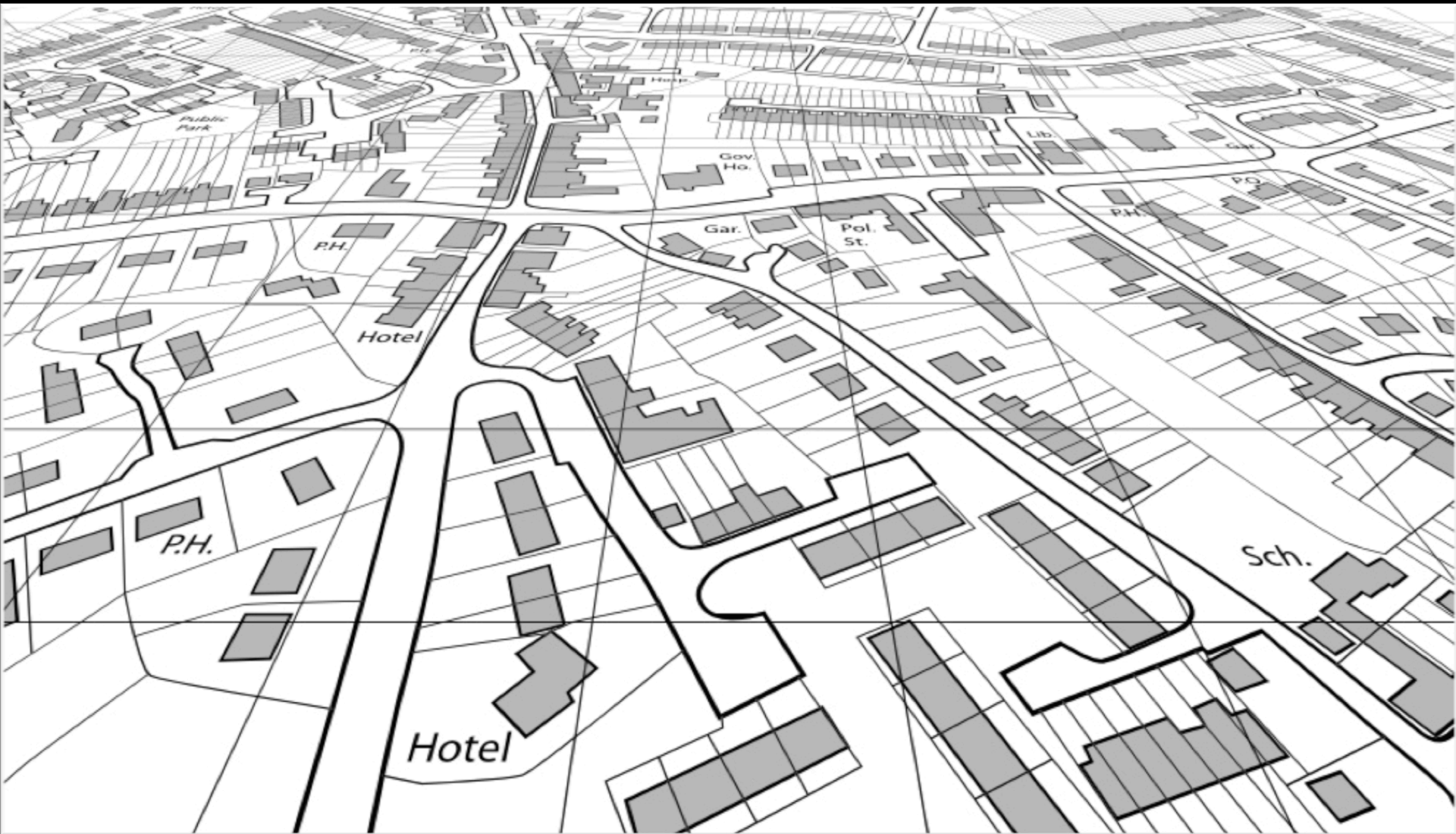
REST

RDBMS



A real architect

What about Town Planning?



*A good idea,
at the time*



Refactoring Paris



Another metaphor...



Conclusion #1

Architecture is a tricky,
even dangerous, metaphor.

Can something complex evolve?



The Architect

The Matrix character



First appearance	The Matrix Reloaded
Created by	The Wachowskis
Portrayed by	Helmut Bakaitis

Information

Species	Computer Program
Title	Creator of the Matrix

The ingredients

Recombination

Mutation

Fitness function

Open Source
Tech Startups

Vertical slicing



Querschnittsfunktionen

Architecture that evolves

The stuff that the expert developers find important to describe the system...

...is gradually changing over time...

...to the point where the origins are no longer discernable.

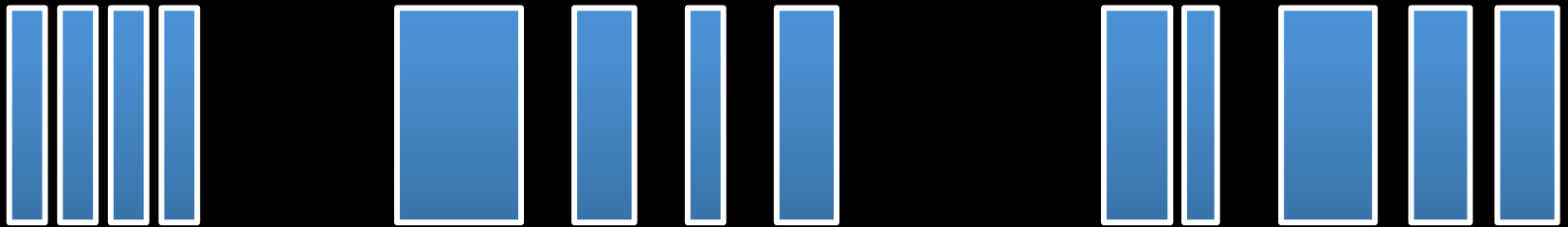
The starting point

How much upfront design is possible?

How much upfront design is reasonable?

What does “upfront” even mean?

Reasonable...



Conclusion #2

Architecture is mostly, or even exclusively, an ongoing activity.

The seductive power of abstractions

Common infrastructure frameworks

```
foreach tag in allTags  
  if tag.images.count == 0  
    unusedTags.add(tag)
```

The seductive power of abstractions

Common infrastructure frameworks

```
public void sendMessage(String topic, QuoteMessage message)
```

abstraction layer

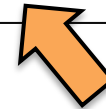
another abstraction layer

yet another abstraction layer

and one more abstraction layer

kernel network stack

```
en0: flags=8863<UP,BROADCAST,SMART,RUNNING,SIMPLEX,MULTICAST> mtu 1500
    ether 14:10:9f:d0:f1:97
    inet6 fe80::1610:9fff:fed0:f197%en0 prefixlen 64 scopeid 0x4
    inet 10.1.1.56 netmask 0xffffffff broadcast 10.1.1.255
    media: autoselect
```



```
{
- search: {
  - location: {
    - position: [
      52.53078,
      13.41085
    ]
  },
- results: {
  - items: [
    - {
      - position: [
        52.5291349,
        13.4098896
      ],
      distance: 194,
      title: "Last Cathedral (The)",
      averageRating: 3,
      - category: {
        title: "Bar/Pub",
        href: http://demo.pbapi.places.public.devbln.europe.nokia.com/places/v1/categories/bar-pub?app\_id=BDjctzFoFSClGaDpE820&app\_code=rBbf%2BF%2Fz,
        type: http://demo.pbapi.places.public.devbln.europe.nokia.com/places/v1/types/categories/bar-pub,
      },
      icon: http://rest-mh-ga-2.itlase.com/p/d/places2/icons/categories/03.icon,
      vicinity: "Schönhauser Allee 5<br/>10119 Berlin<br/>Germany",
      having: [ ],
      type: http://demo.pbapi.places.public.devbln.europe.nokia.com/places/v1/types/place,
      href: http://demo.pbapi.places.public.devbln.europe.nokia.com/places/v1/places/276u338294c7482b4c4f85a28dd36397220484;context=ZmxvdylpZD0lYmM0NzdmMC00MTk0LTRlYmEtYmElOC0yapp\_code=rBbf%2BF%2Fz
    },
    - {
      - position: [
        52.5326241,
        13.4103318
      ]
    }
  ]
}
```

Nokia Places

Explore

Cotton Club
Theatre, Music & Cu
Alter Steinweg 10 C
Distance: 487 m
Position: 53.55043, 9
Rating average: 5

Golden Pudel Club
Dance or Nightclub
Sankt Pauli Fischmar
Distance: 2 km
Position: 53.54603, 9
Rating average: 5

Hasenschaukel
Snacks/Fast food
Silbersackstrasse 17-
Distance: 1 km
Position: 53.548747,
Rating average: 5

Nokia Places

Antipodes

Categories: Coffee/Tea
Alternative Names: Antipodes Cafe
Location:
Fehrbelliner Straße 5
10119 Berlin
Germany
Distance: 105 m
Phone: +4917638340118
Rating: 4.1 (15 ratings)

Provided by Qype

Hakkasan
★★★★★
~2.2 km

"DINING"

HAKKASAN

about photos re

get directions
8 Harway Place
London W1T 1HD, United Kingdom

"With its black-lacquered design and marble flooring and its louche basement nightclub vibe, this elegant, modern Chinese restaurant ..."

HAKKASAN

photos reviews

+ add a photo

Chicago, USA

Chicago, USA
maps.nokia.com/city/usa/chicago/41.8264549;-87.26492119000normal.day

NOKIA Maps Pulse

Search Directions

Chicago, USA

12:56 PM CDT
6°C

Explore Places in Chicago

InterContinental Chicago Hotel	West Egg Cafe Restaurant	Macy's Department Store	Grand Lux Cafe Restaurant
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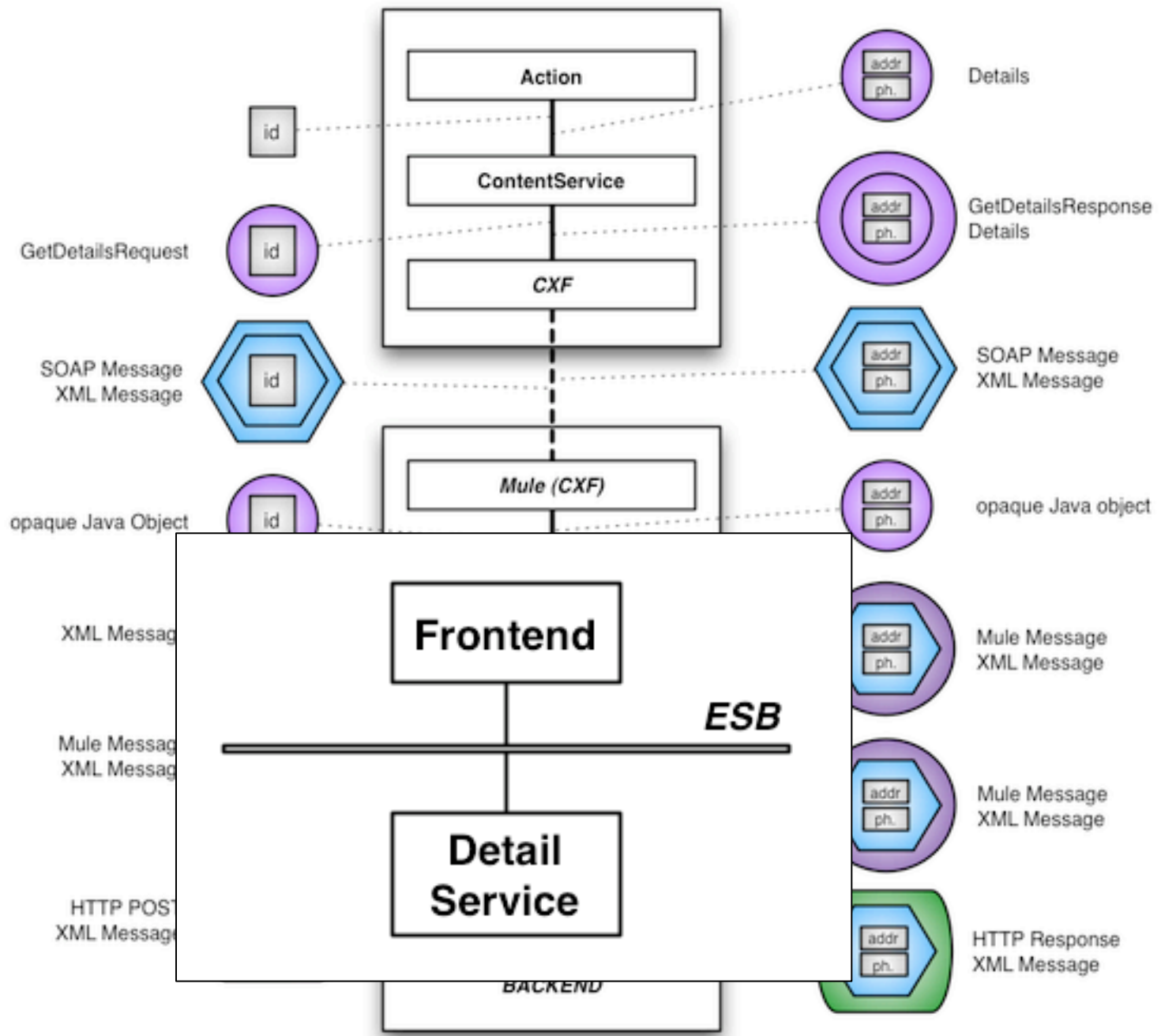
Architecture and abstractions

Common infrastructure frameworks

“Clean” and “correct” architectures

Mechanical Sympathy

Know your abstractions



Conclusion #3

Architecture and development
cannot be separated.

Artefacts

Design diagrams / models

Patterns

Frameworks

Artefacts

Design diagrams / models

Patterns

Frameworks

Code

Tests

Artefacts

Design diagrams / n

Patterns

Frameworks

Code

Tests

Guidelines / principles

Visualisations

Composition over Inheritance

Code should only be in one deployable; exception: DTOs

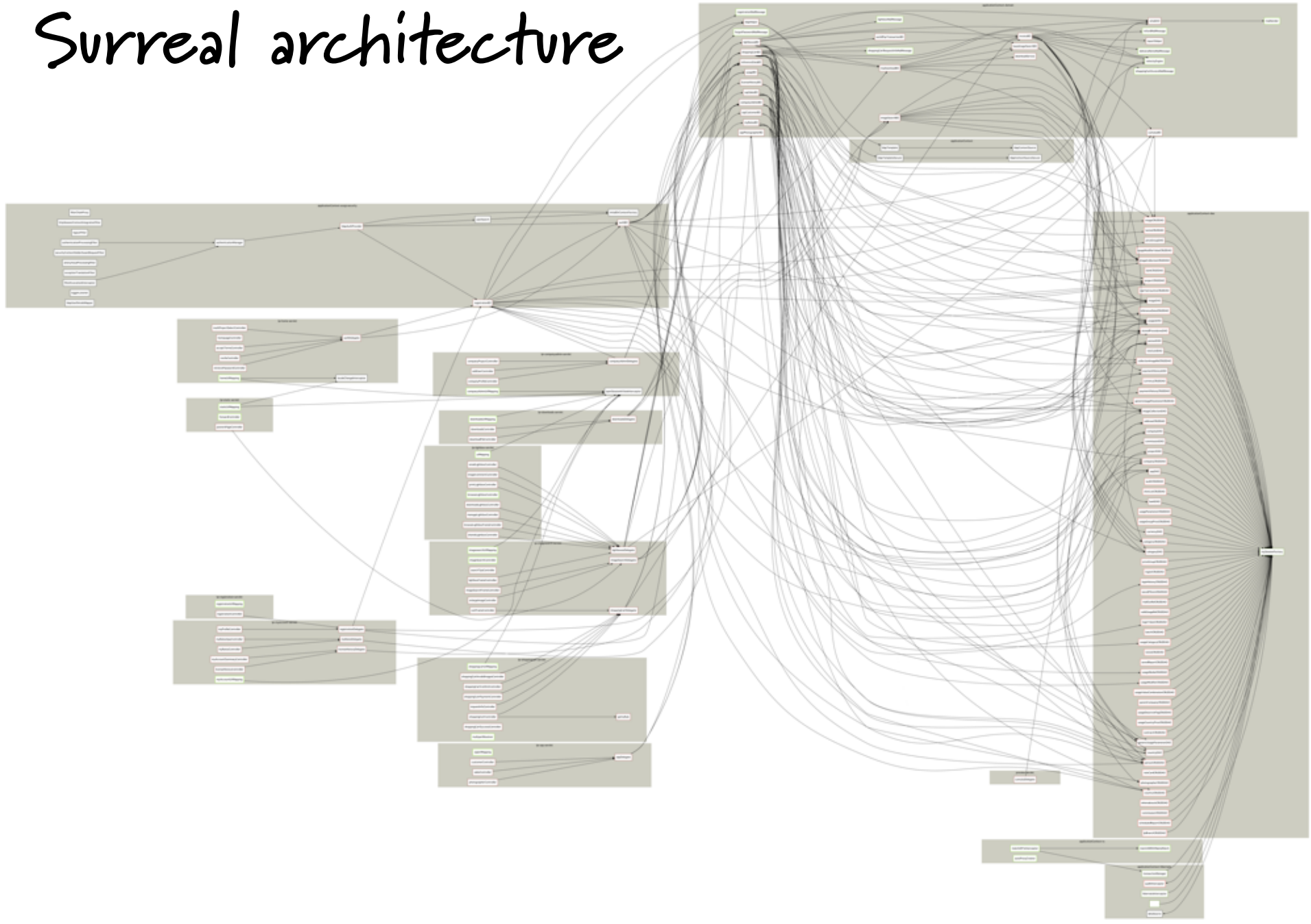
When adding a new *instance of* an old one must be removed

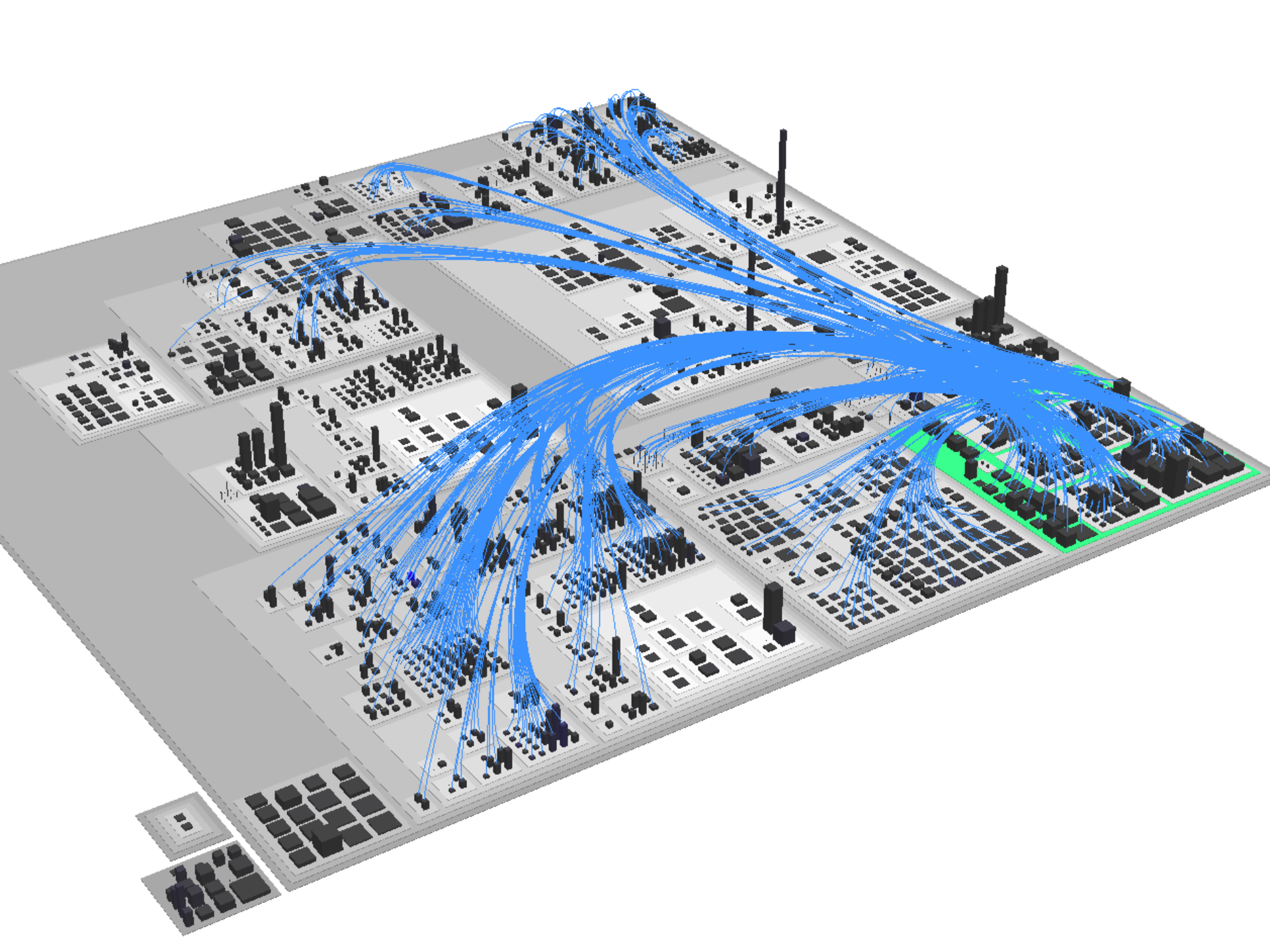
Every deployable has a health page that provides information about configuration and state in a text-based format

The real architecture



Surreal architecture





Conclusion #4

Most of what architects have done traditionally should be done by developers, or by tools, or not at all.

The value of an architect

“An architect’s value is inversely proportional to the number of decisions he or she makes.”

It is also inversely proportional to the number of diagrams and frameworks he or she creates.

The architect as a guide?



THANK YOU

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