

GraphQL for Cities

(And other public organizations)

APIDAYS INTERFACE 2020



Who is this for?



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Roy Derks

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"Open-sourcing" your code involves more work than changing your private repository into a public one. Without documentation it's hard for others to understand and value your code

5:05 AM - Oct 10, 2019



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A little bit about
myself first...



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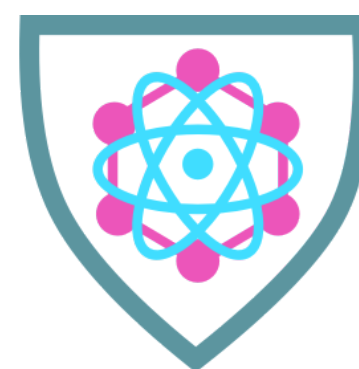


Roy Derks



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✖ City of
✖ Amsterdam



React GraphQL
Academy



Auth0



SwitchBay.
ELECTRIFY YOUR LIFE



Amsterdam?



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City of Amsterdam

- Since 1275
- Population: 860,000



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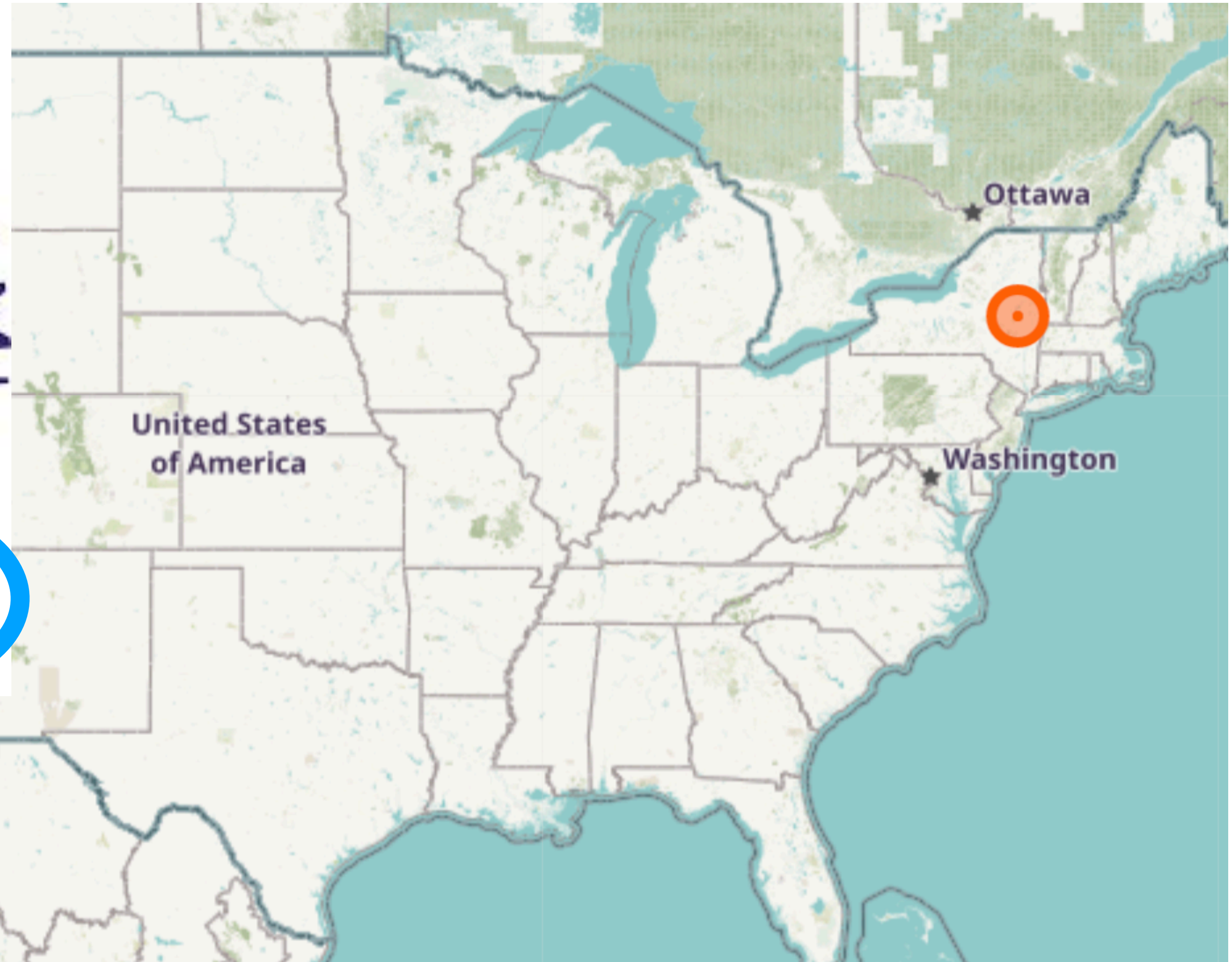


Not in the U.S.!



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XXX



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We're known for...



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XXX



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But we also do tech!



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*In 2017, approximately **60,000 people** were employed by more than **1,000 technology companies** in Amsterdam, representing **11% of the total Amsterdam labour market.***



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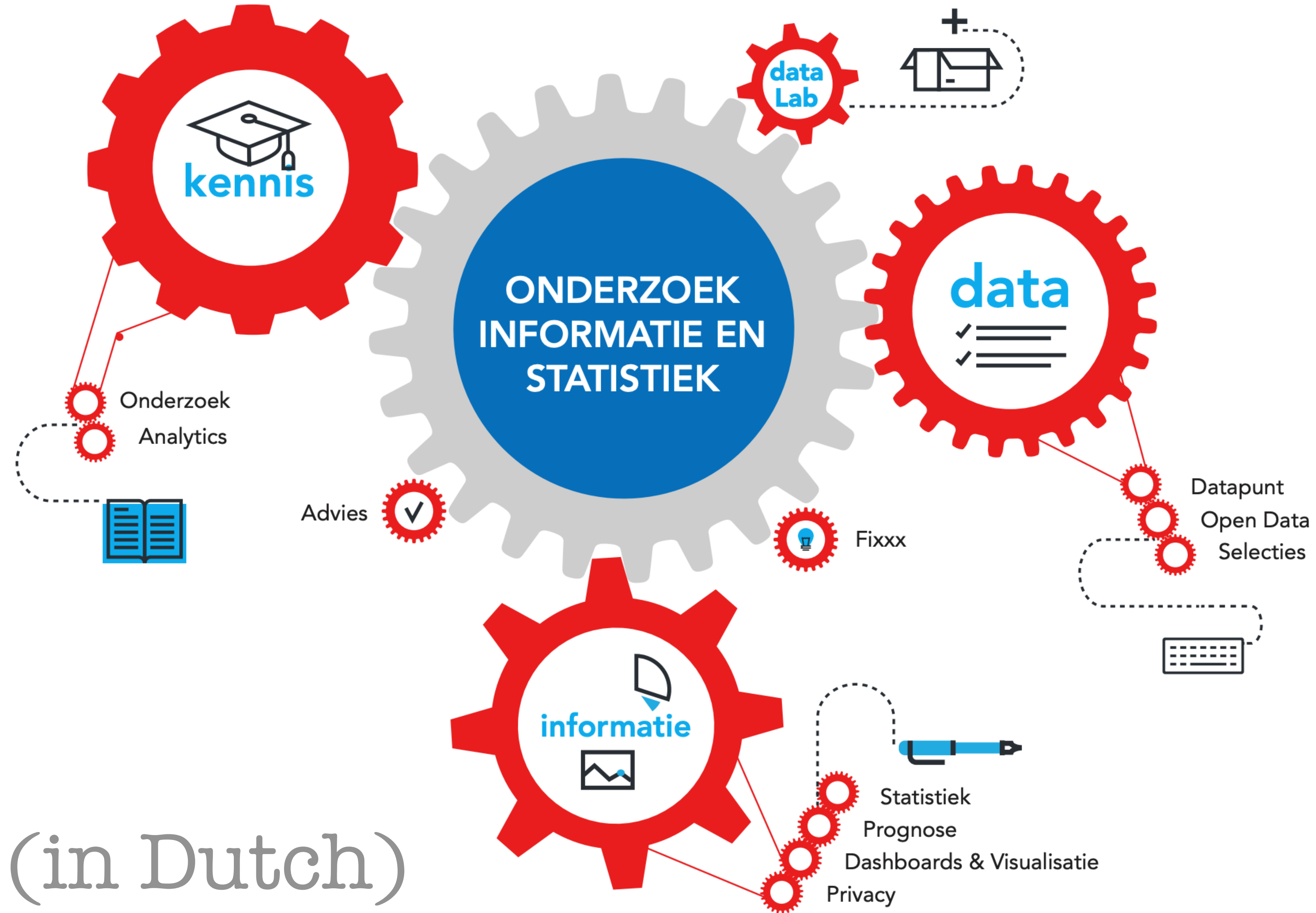
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Even at our local
government



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(in Dutch)



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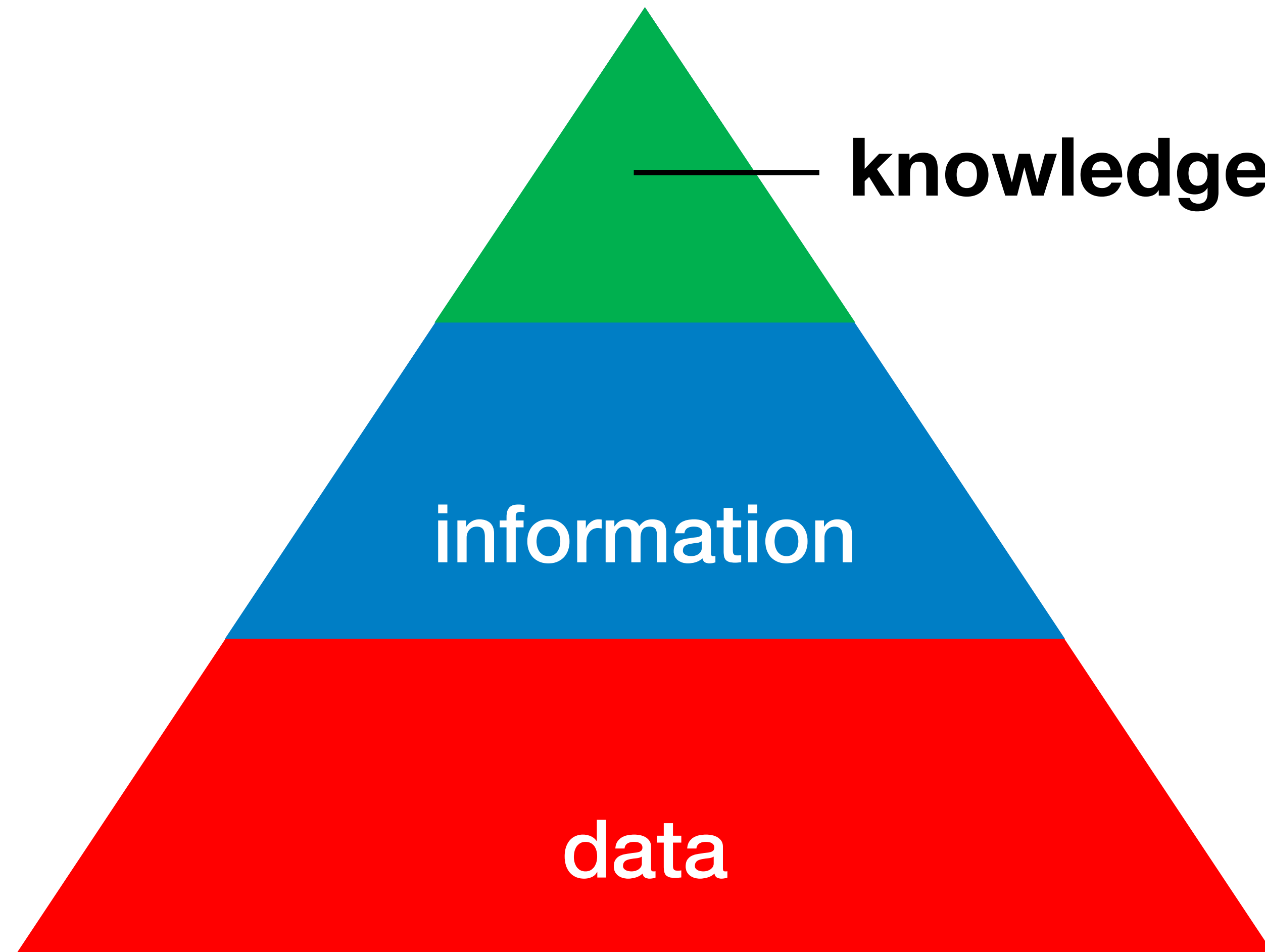
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We're developing projects for
civil servants, researchers,
and **civilians**



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Or based on problems the city
is facing



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How to solve this?



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But also technology 



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RESTful API

Dit overzicht van browsable interfaces en openAPI documentatie beperkt zich tot de API's ontwikkeld door programma DataPunt van Onderzoek, Informatie en Statistiek. API's van andere partijen vind je in de [datasetcatalogus](#).

Instructies, bijv. over omgaan met autorisatie, vind je op de helppagina over [API's gebruiken](#). [Onjuiste of ontbrekende gegevens?](#) [Probleem of suggestie?](#)
datapunt at amsterdam punt nl

Naam	Browsable API	Documentation	Status	Licentie
Afvalcontainers	Online API	OpenAPI or Redoc	Live	
Afvalregels bij locatie x, y	Online API	OpenAPI	Live	
Basisregistratie Adressen en Gebouwen (BAG)	Online API	OpenAPI	Live	
BAG Search	Online API	OpenAPI	Live	
Basisregistratie Amsterdamse Gebieden	Online API	OpenAPI	Live	
Basisbestand Gebieden Amsterdam (BBGA)	Online API	OpenAPI	Live	
Basisregistratie Kadaster (BRK)	Online API	OpenAPI	Alleen bereikbaar binnen de gemeente	
Bedrijfsinvesteringszones (BIZ)	Online API	OpenAPI	Live	
Datasetcatalogus (dcatd)		OpenAPI	Live	

We have over 35 public APIs



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And everything is open!



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Transparency

Collaboration

Why?

Reusability

Find out more at <https://amsterdam.github.io>



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Also, we follow European
guidelines for open standards



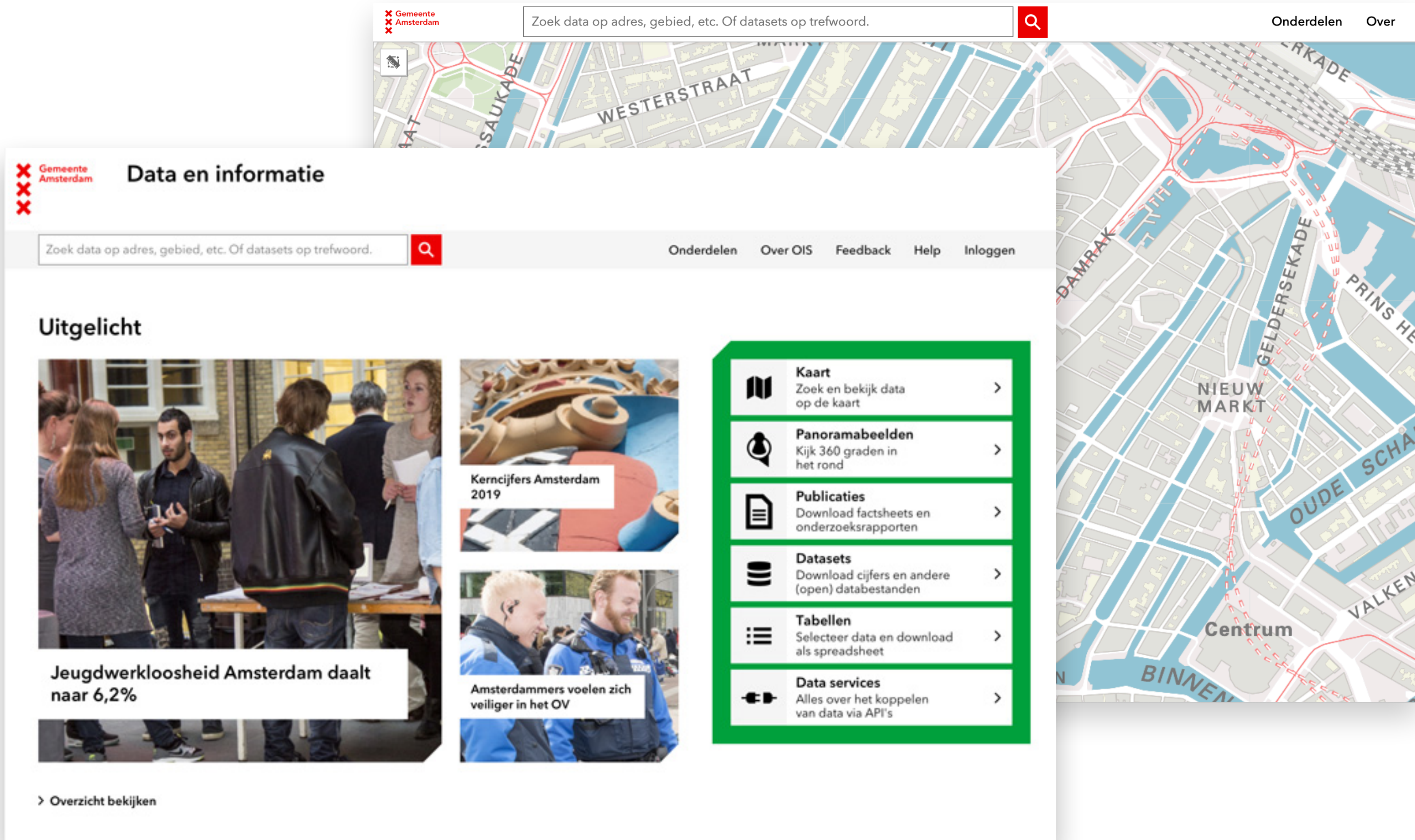
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What I'm working on:



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Portal that combines (almost)
all open data of the city



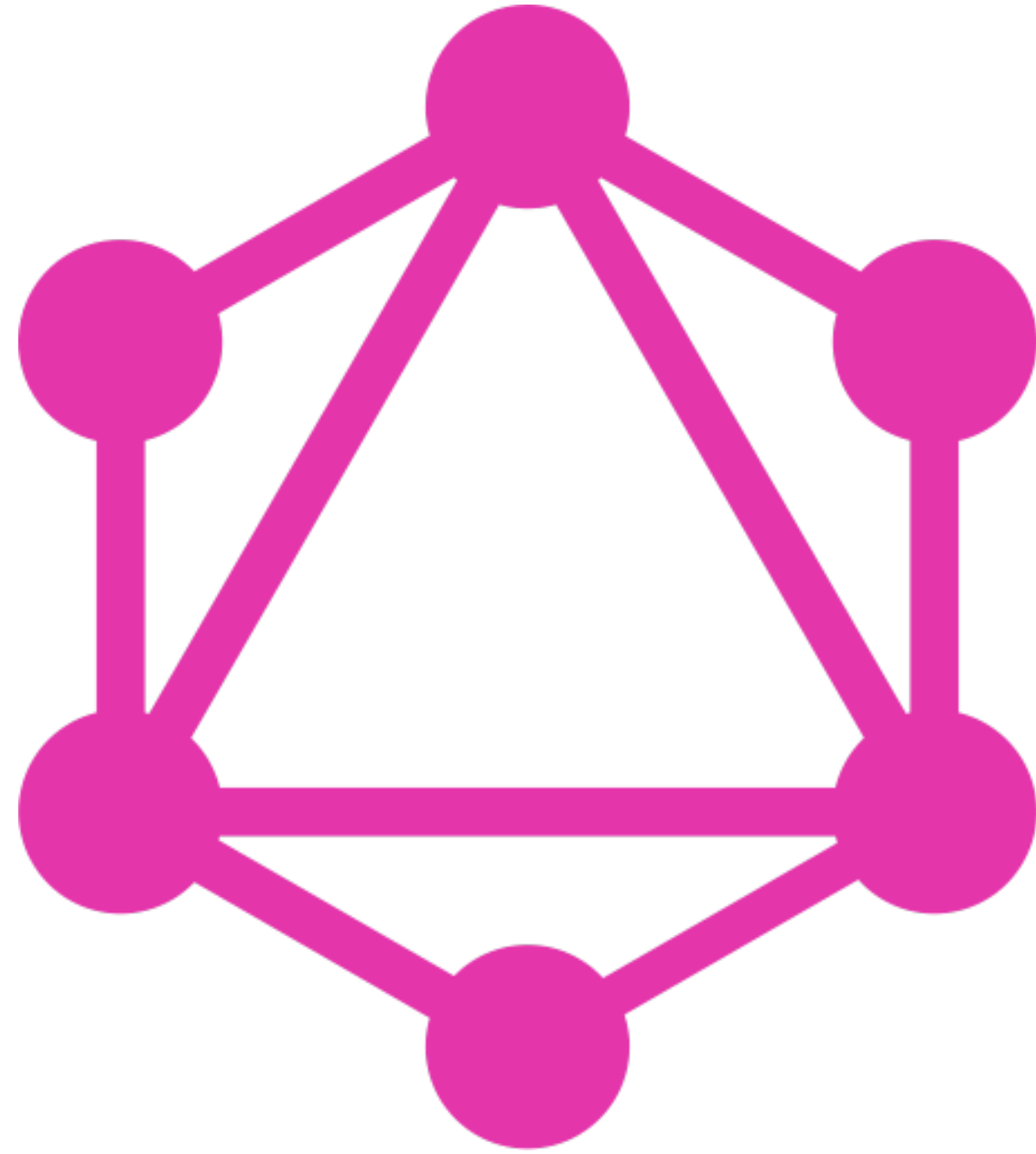
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But how to build applications
around public APIs?



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For this we use
GraphQL



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To create a **data layer**



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GraphQL is **all about graphs**



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**Public APIs can be wrapped to
represent a graph**



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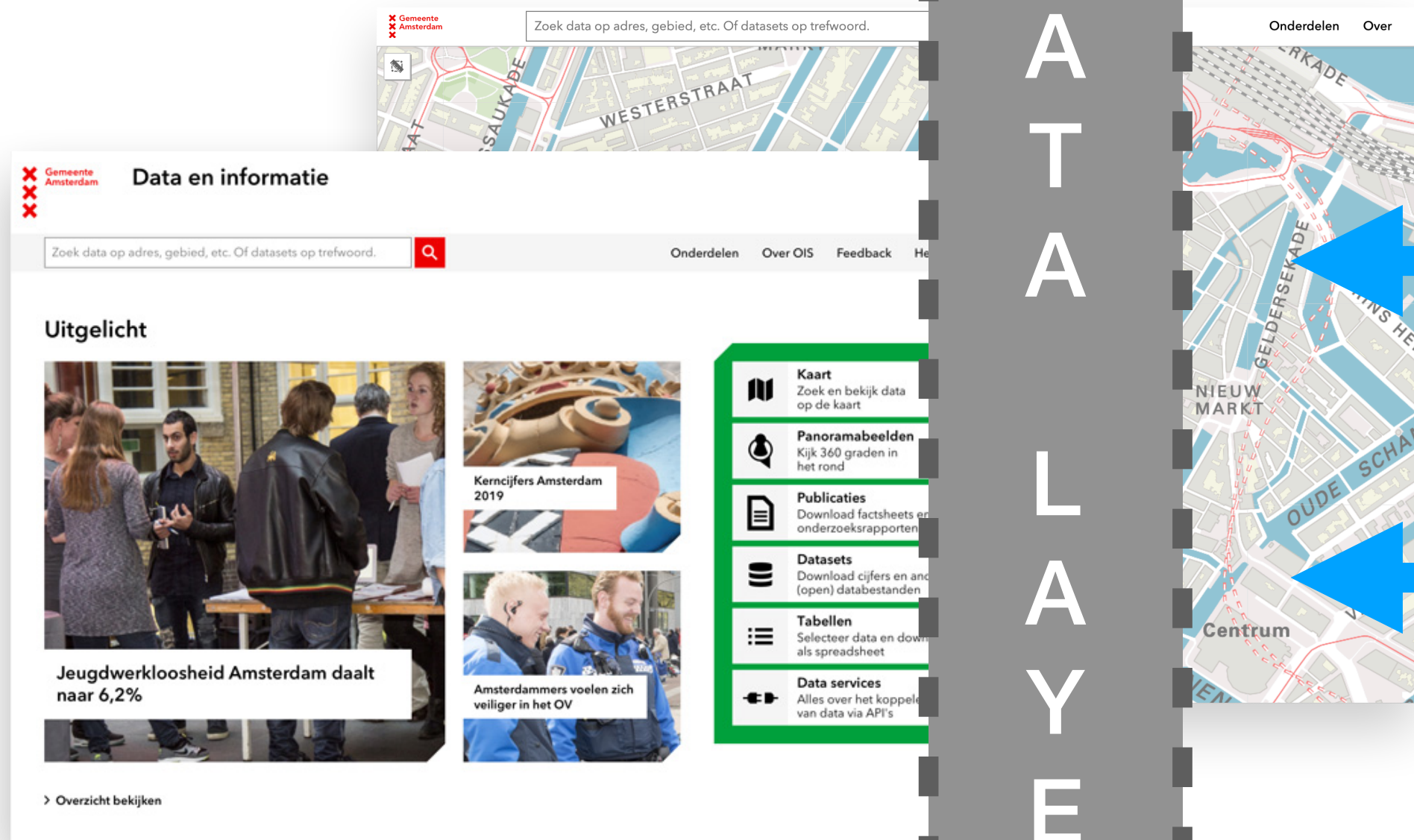


*A data access layer (DAL) in computer software is a **layer** of a **computer program** which provides simplified access to **data** stored in **persistent storage** of some kind.*

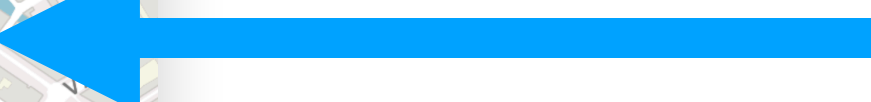
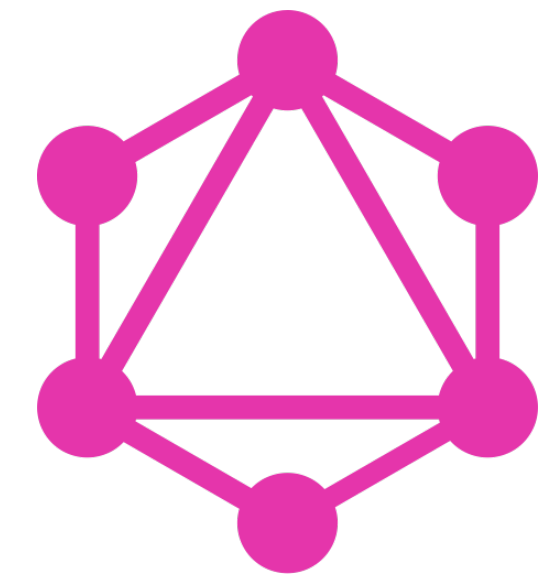
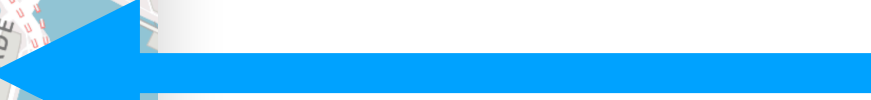
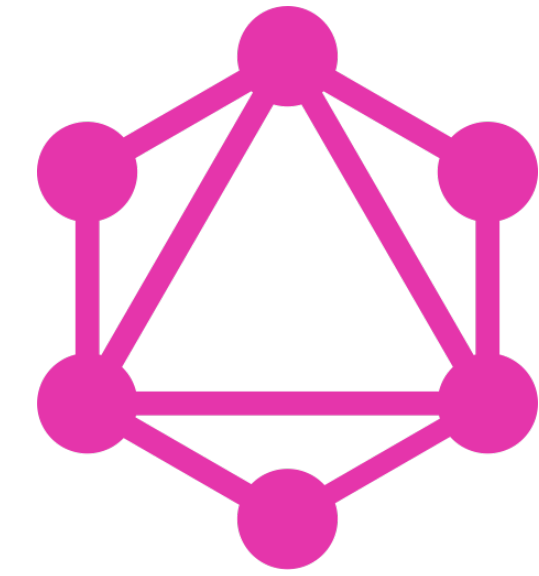
- the internet



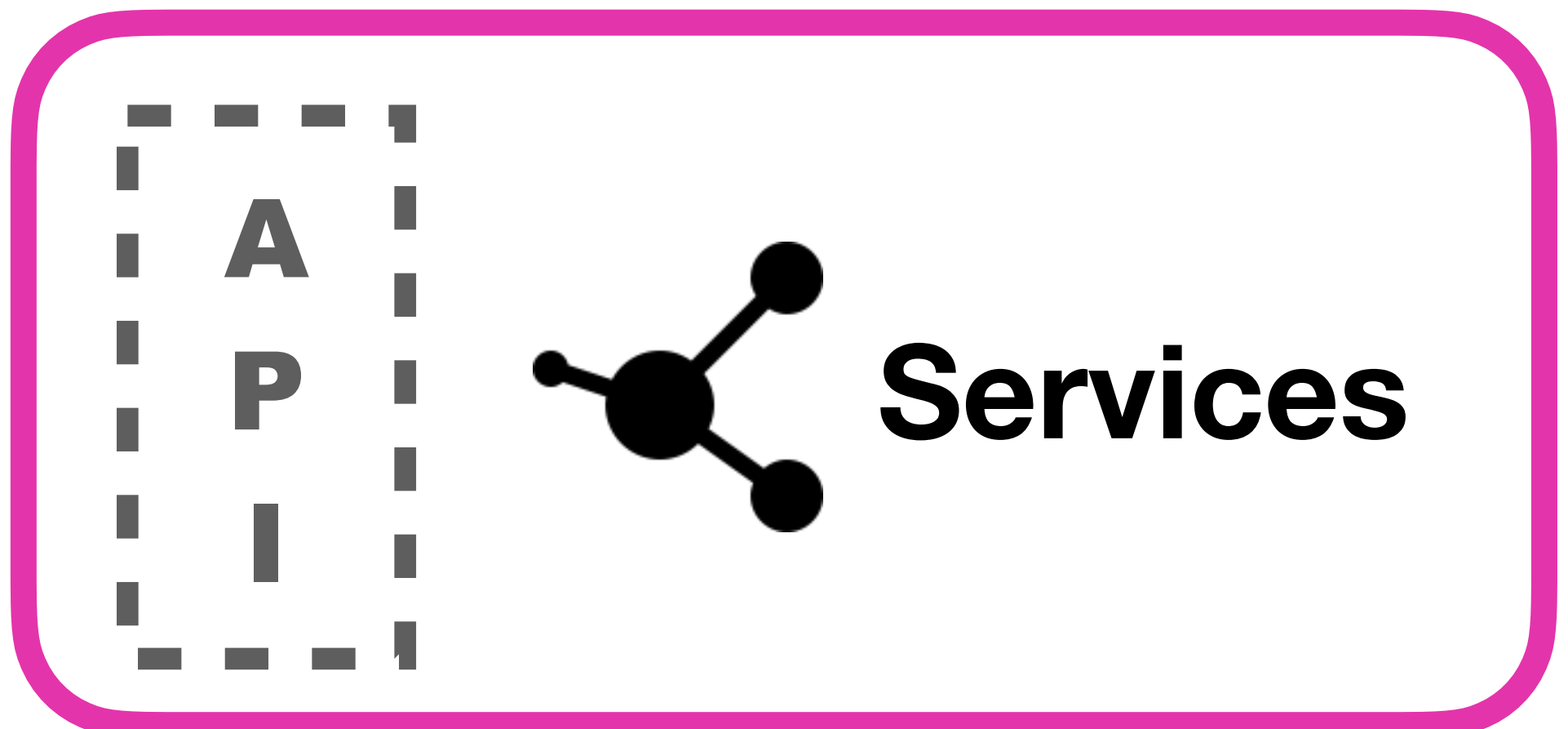
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DATA
LAYER



API A



API B



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This way we can **tailor** public
APIs **to user needs**



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Can't this be done without
GraphQL?



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Want to learn more?



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Want to learn more?



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Search: Roy Derks

<https://amsterdam.github.io>

<https://github.com/amsterdam>

<https://npmjs.com/org/datapunt>