

October 12th 2021

Composable commerce on top of Shopware

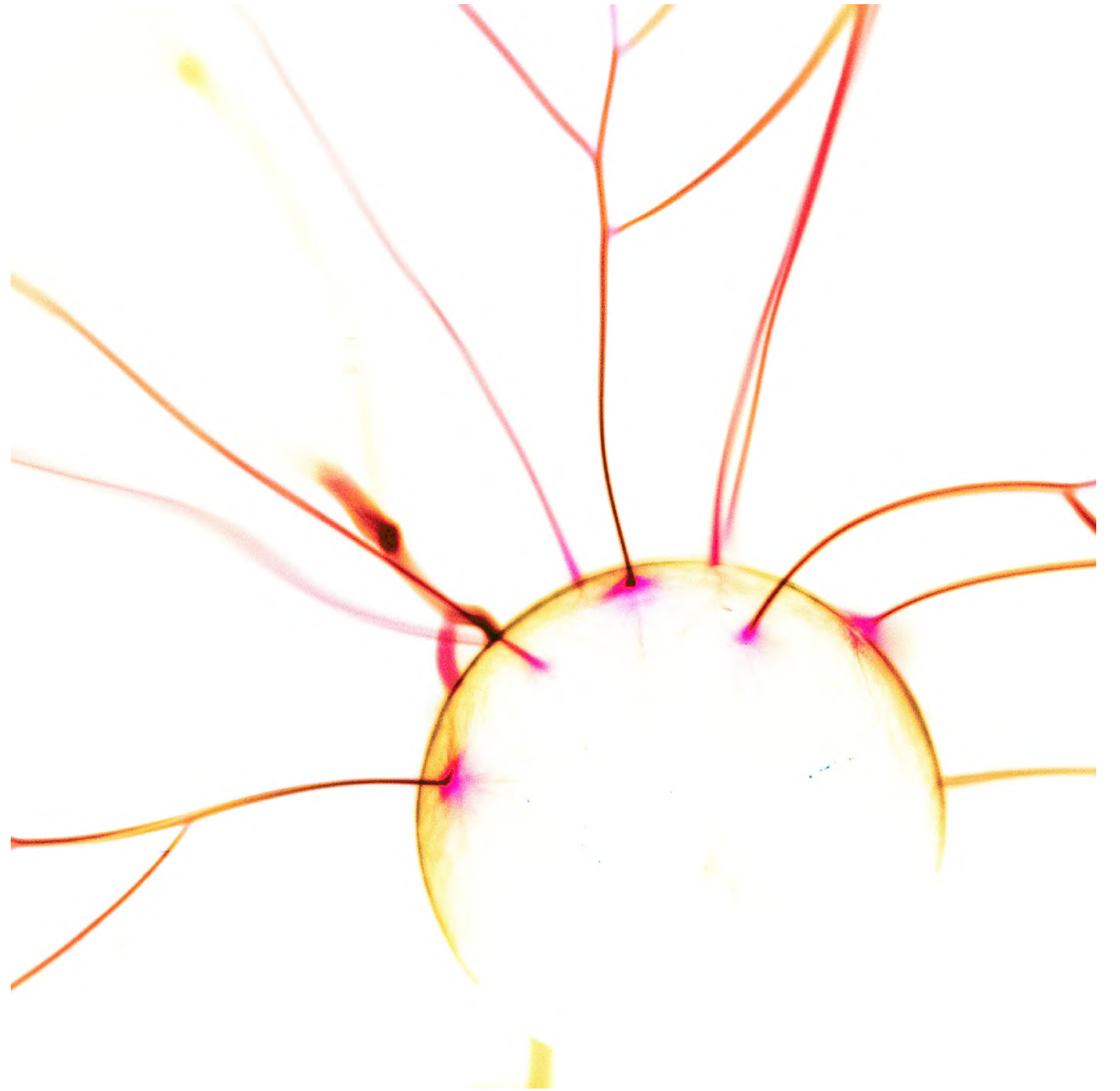
FRONTASTIC

Reacticon 2021

Kore Nordmann (@koredn / kore@frontastic.cloud)

Composable:

No commerce site is only powered by a single backend (any more)



My assumptions

Continuous innovation over big bang

- Commerce projects are there to last and no 1-shot deals any more
- We learn from our users and continuously innovate to improve conversion rates

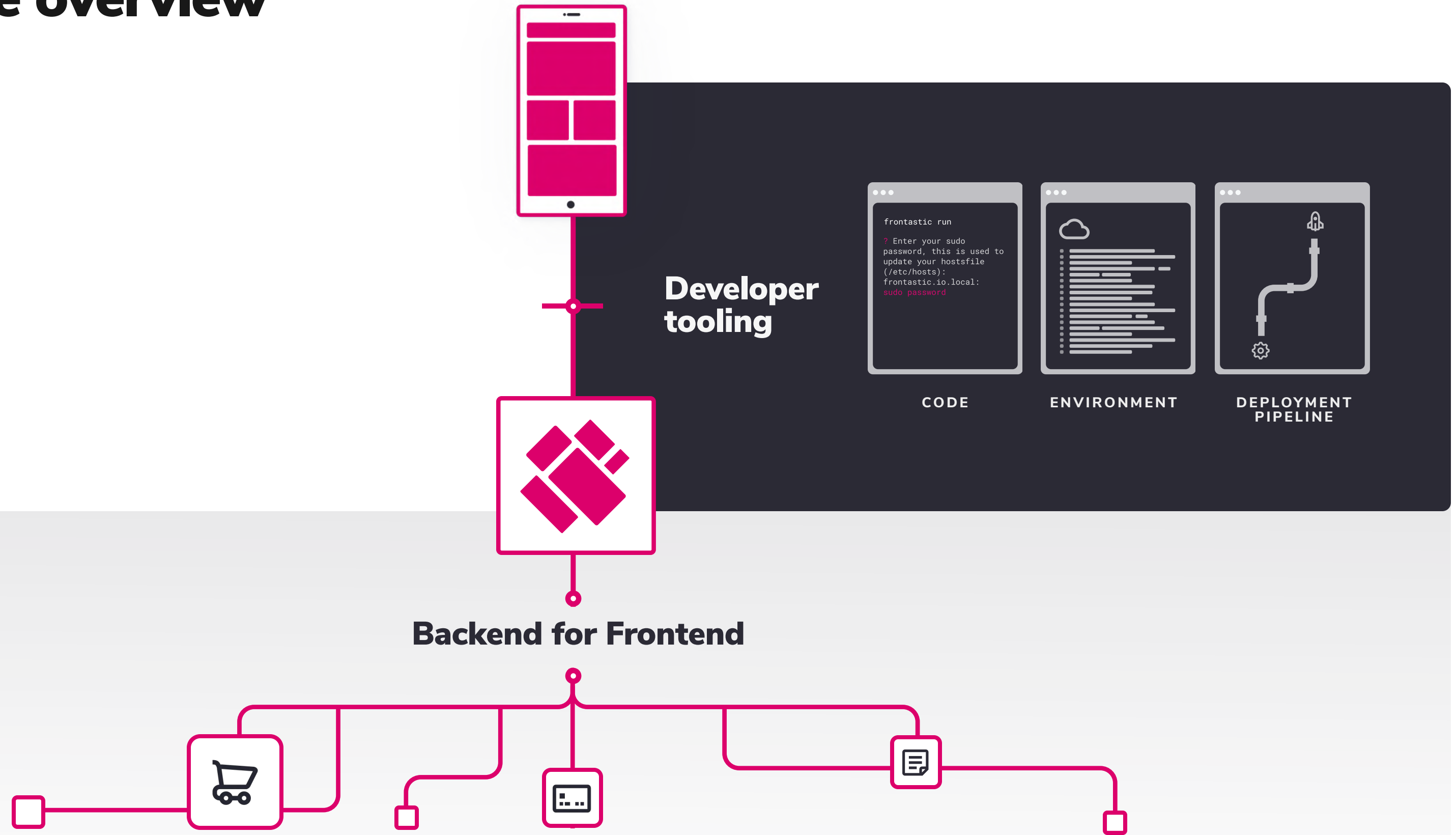
Business understands the target group best

- The commerce site operator has or hires non-developers who will understand the target group
- Different target groups have different requirements to reach frontend excellence

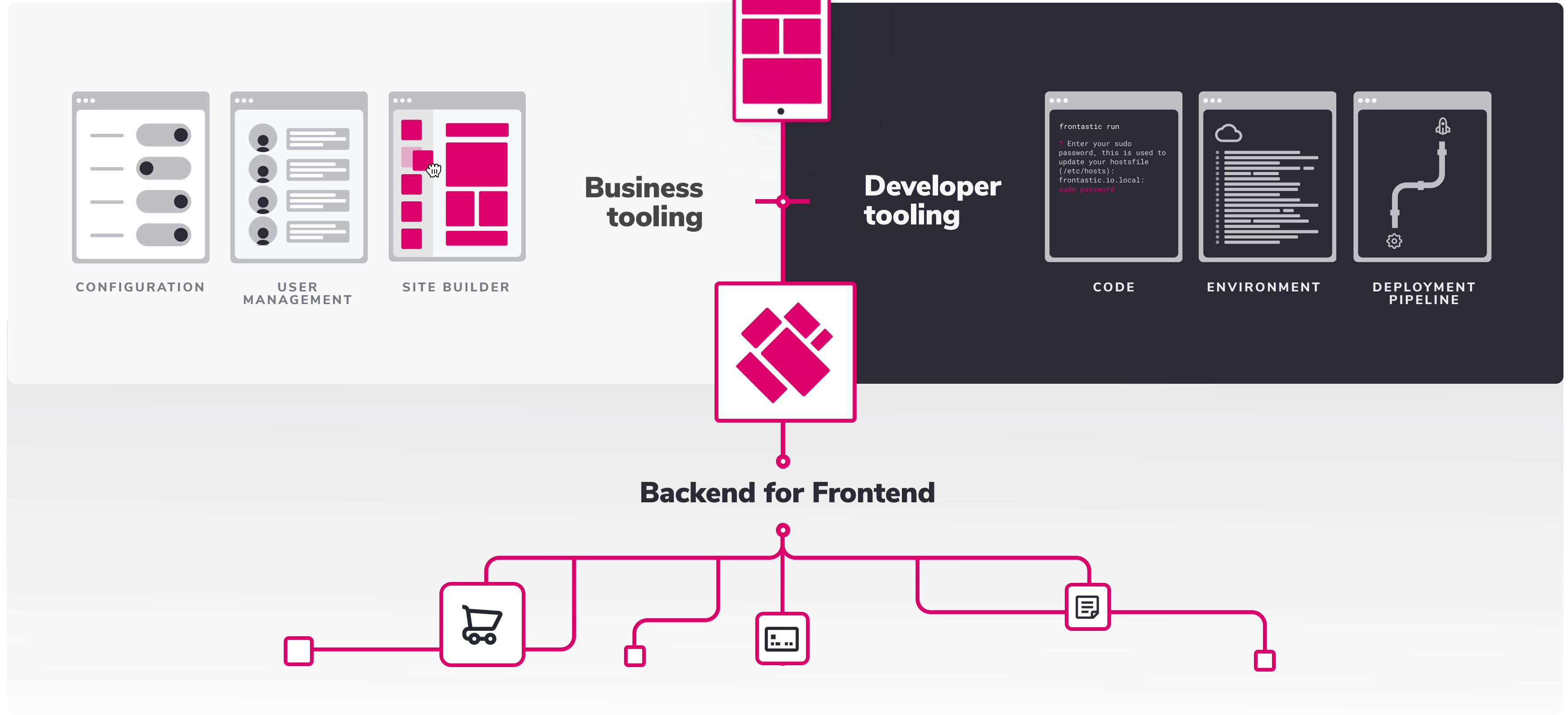
There's constant market evolution and innovation

- Backends will change, since innovation happens everywhere
- New use cases will always require adding or developing new backends

Architecture overview



Architecture overview



Me: **Kore Nordmann** (@koredn)

CTO and Co-founder Frontastic GmbH



Frontastic retreat

<https://frontastic.cloud/>
<https://kore-nordmann.de/>

Common workflows we see



Integrate and orchestrate

Developer workflows

Integrate new backends

Federation (Contentful, GraphCMS)

Apollo GraphQL

Custom Backend for Frontend

Frontastic API hub



Build, deploy, and iterate

Digital team workflows

Build new frontend components

Next.js

Vue Storefront

Custom React / Vue / ... stack

Frontastic PWA



Create, manage, and optimize

Marketing workflows

Create landingpages, optimize pages

Jira / custom development

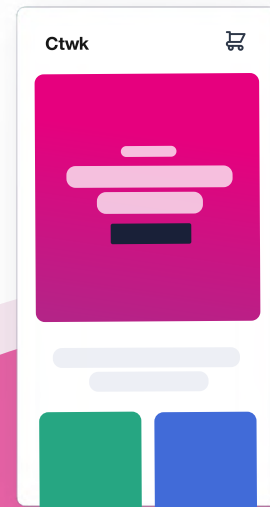
GraphCMS / Contentful

Shopware Shopping Experiences

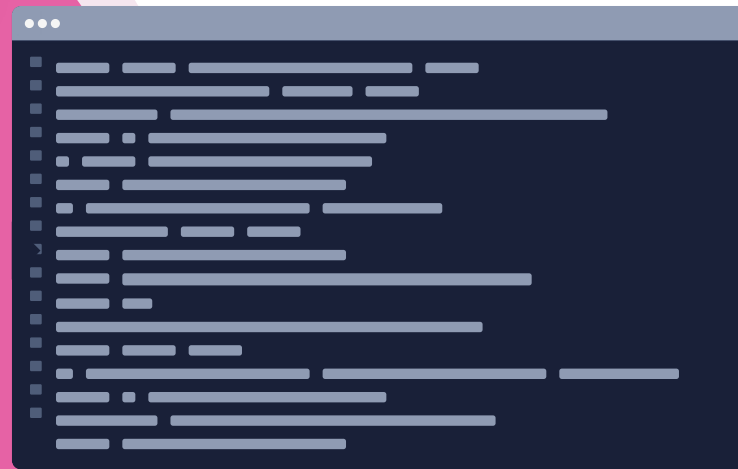
Frontastic studio

How Frontastic works

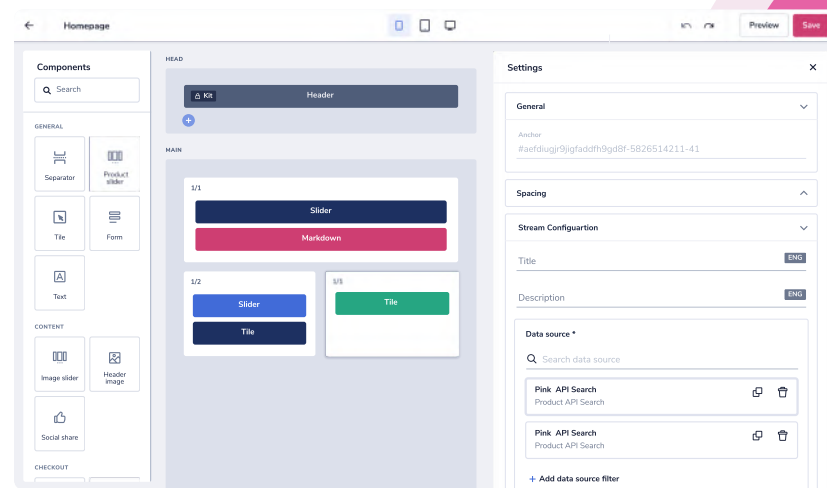
Serve



Build, deploy, iterate



Manage and optimize



Orchestrate

Orchestrate

Our **API hub** connects to any headless or API first platform for initial setup in **days** instead of weeks.

Build, deploy, and iterate

Our **developer tooling** includes React components for commerce use cases for initial setup in days instead of weeks and built-in workflows to enable feature releases in **hours** instead of days.

Manage and optimize

Our **studio** gives **full autonomy** for **business users** to manage pages, components, navigation, filter API data, and preview sites in real-time on a real device.

Serve

Our **frontend delivery** serves all commerce sites as a PWA — optimized for performance and mobile first and with a **99.9% uptime guarantee**.

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Create, manage, and optimize

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Integrate and orchestrate

Backend for Frontend

A unified way of integrating with your tech landscape



Content APIs



Commerce APIs



Custom APIs

Connect with any system you want to provide data from

Look at the code

Get all films from Star Wars GraphQL API

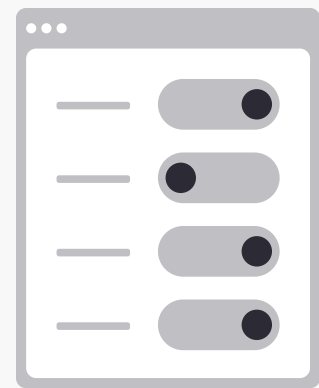
```
public function handle(Context $context, Node $node, Page $page, Tastic
$tastic, $fieldValue)
{
    return json_decode($this->httpClient->request(
        'POST',
        'https://swapi-graphql.netlify.app/.netlify/functions/index',
        json_encode(['query' => '{ allFilms { films { title } } }']),
        ['Accept: application/json', 'Content-Type: application/json'],
    )->body);
}
```

Look at the code (JavaScript edition)

Get all films from Star Wars GraphQL API

```
export default {  
  // ...  
  'data-sources': {  
    'starwars/films': (config: DataSourceConfiguration, context:  
DataSourceContext) => axios.post(  
    'https://swapi-graphql.netlify.app/.netlify/functions/index',  
    { query: '{ allFilms { films { title } } }' }  
  ).then(result => result),  
  // ...  
},  
  // ...  
};
```

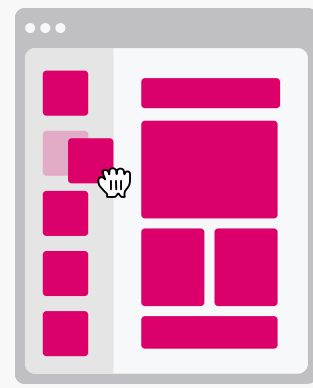
Architecture overview



CONFIGURATION



USER
MANAGEMENT

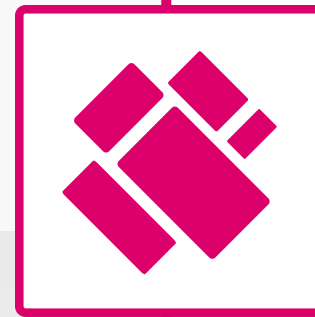


SITE BUILDER

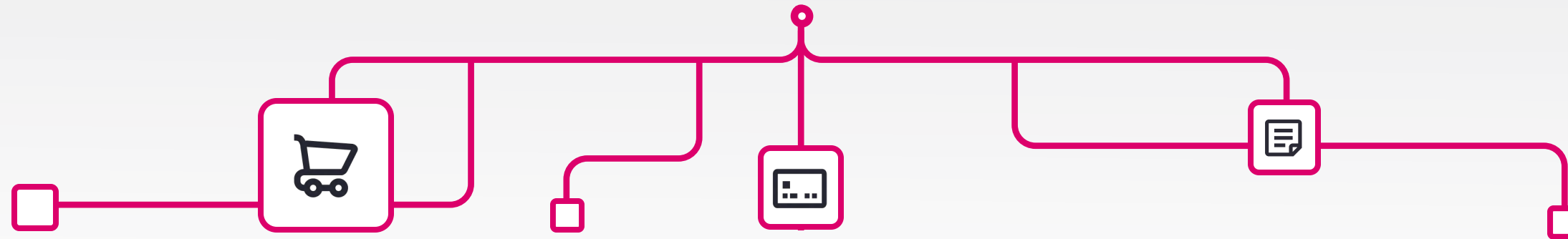
Business tooling



Allow the business to specify query properties



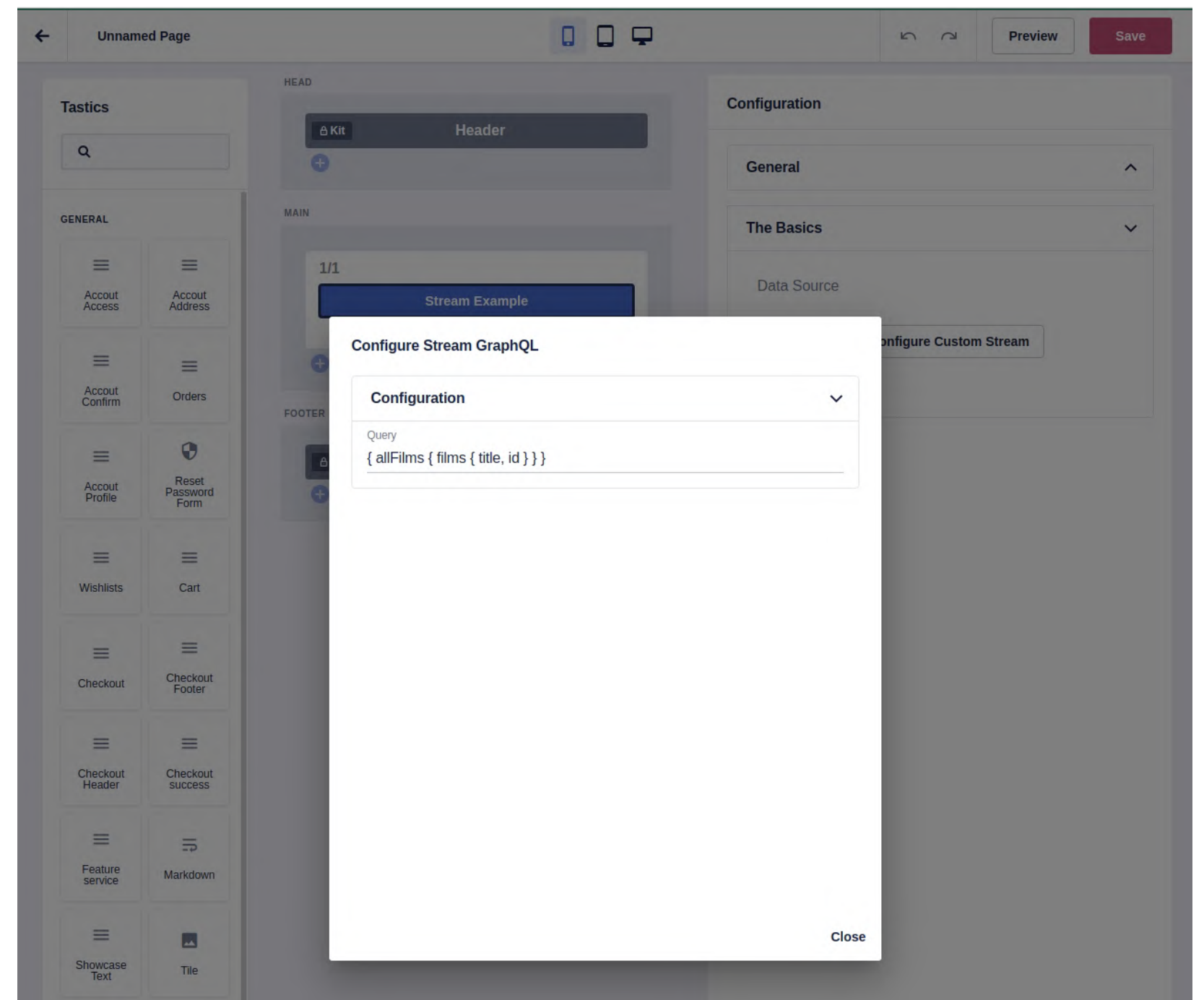
Backend for Frontend



Look at the code — business edition

Get all films from Star Wars GraphQL API

```
public function handle(...)  
{  
    return json_decode($this->httpClient->request(  
        'POST', 'https://swapi-  
graphql.netlify.app/.netlify/functions/index',  
        json_encode(['query' => $fieldValue['query']]),  
        ['Accept: application/json', 'Content-Type:  
application/json'],  
    )->body);  
}
```



Keep in mind



Fetch data in parallel for performance

Service orchestration performance now is the key to site performance



Optimize number of backend requests

Making multiple requests from the frontend will increase **CLS**, group requests, but limit them



Mind service downtimes, slowness, ...

Services will fail, so take care of it (timeouts, circuit breakers, resilience, ...)



Monitor all requests for errors and status

(Performance) Monitoring is essential to keep track of services

Keep in mind



(Cumulative) Layout Shifts
are pretty bad



Fetch data in parallel for performance

Service orchestration performance now is the key to site performance



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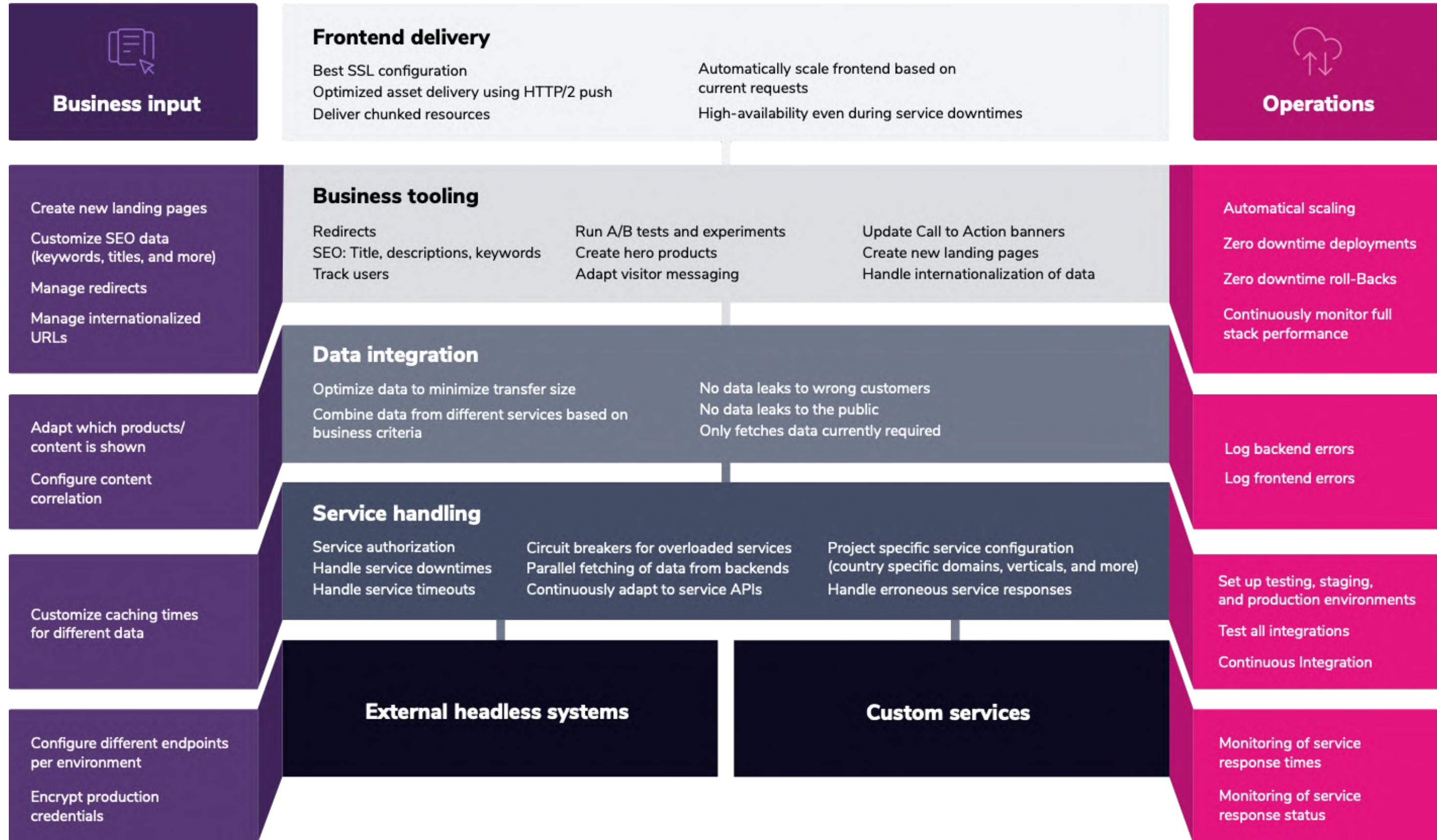
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Monitor all requests for errors and status

(Performance) Monitoring is essential to keep track of services

Backend for Frontend



Conclusions

... and what's in it for you?

Continuous innovation over big bang

- Allow business to do the minor changes
- **Focus on stable and high quality code**

Business understands the target group best

- Landing pages should be created by them, **not you implementing the next Jira ticket “move button”**
- Iterate on user experience and **develop new ways of addressing the customer**

There's constant market evolution and innovation

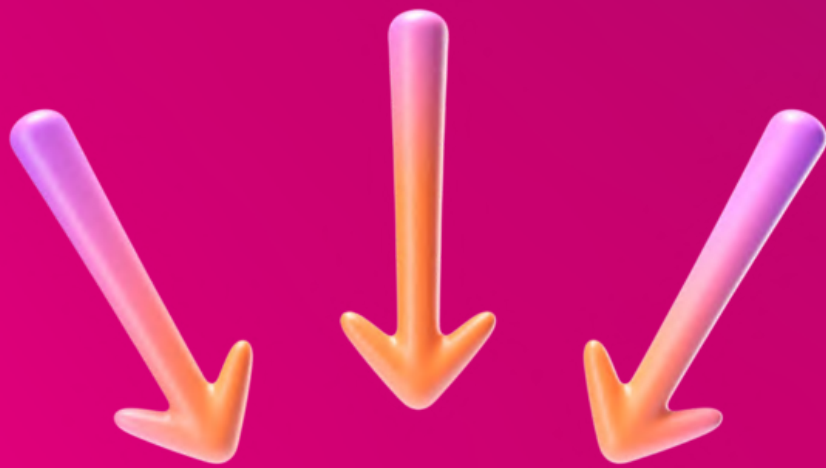
- Encapsulate service requests, so you can replace them
- Integrate new services blazingly fast to verify their positive effect on conversion

Take away:

**Think business first,
to make your
developer life easier.**

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Thanks for listening



I'm hiring (frontastic.cloud/careers):

- Fullstack / Backend Developer (Multiple: API/SaaS/studio)
- Frontend Developer (studio)
- Principle Frontend Engineer
- Site Reliability Engineer
- Engineering Manager

Happy to talk to you!

Kore Nordmann

kore@frontastic.cloud

[@koredn](https://twitter.com/koredn)