

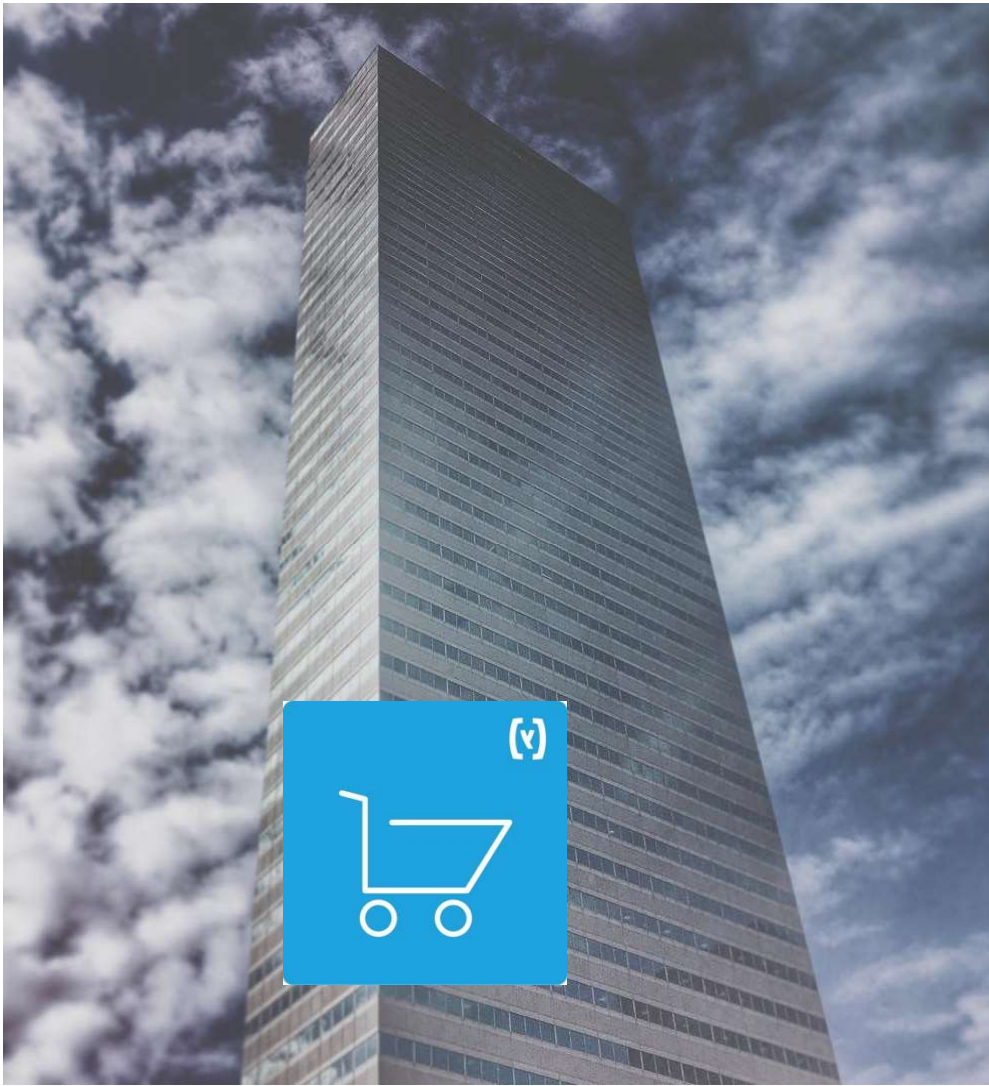
Elmar Schraml



Commerce as a Service vs Commerce as a Monolith – 2 Flavors of Hybris compared in Practice

Track: Architecture





\$ > who am i

Entwickler || Consultant
|| Architekt

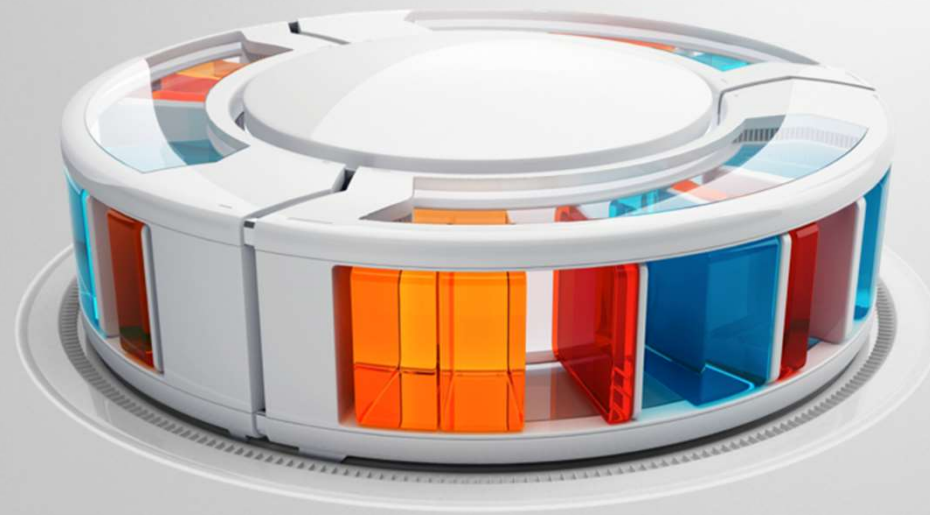
Java && hybris && ecommerce



MacBook Pro

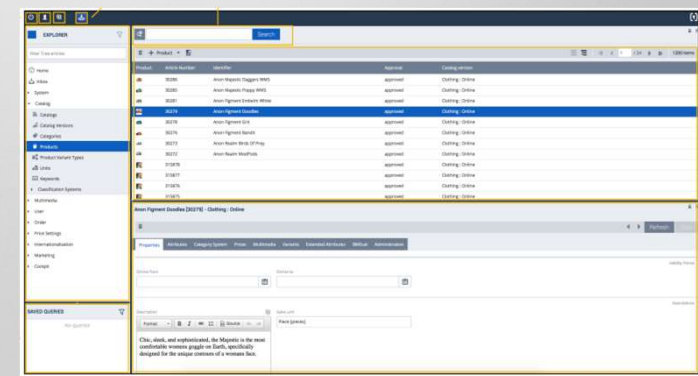
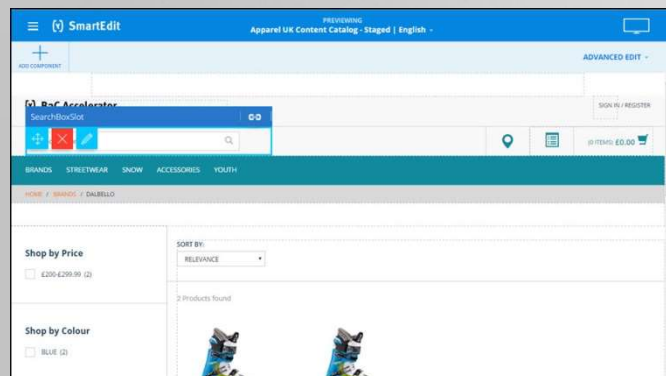
hybris
commerce

Hybris commerce platform

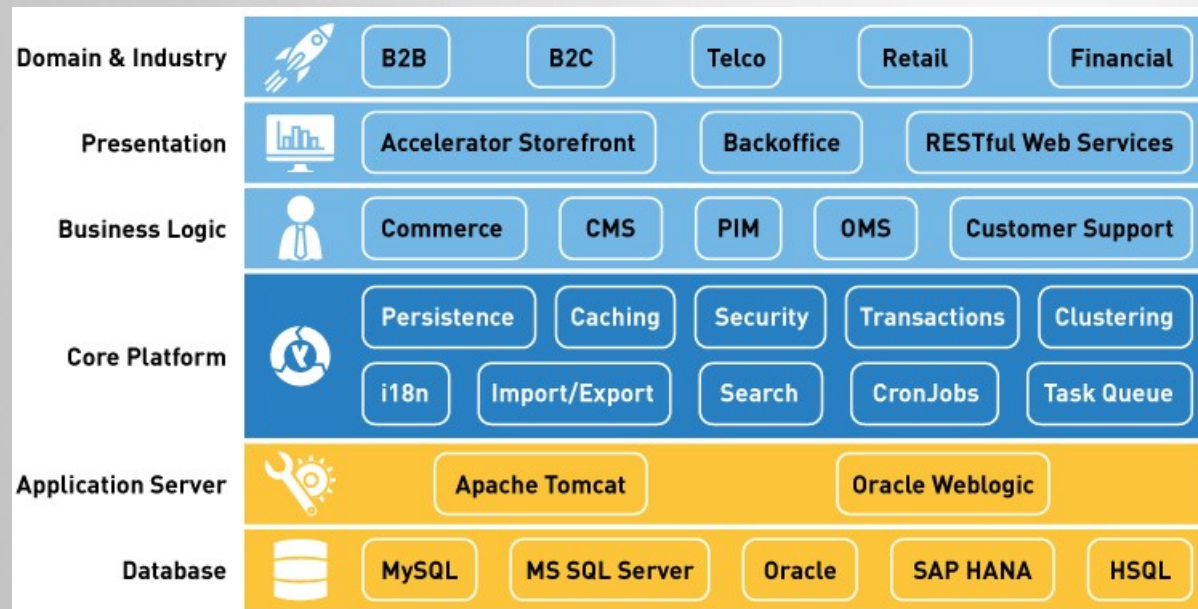




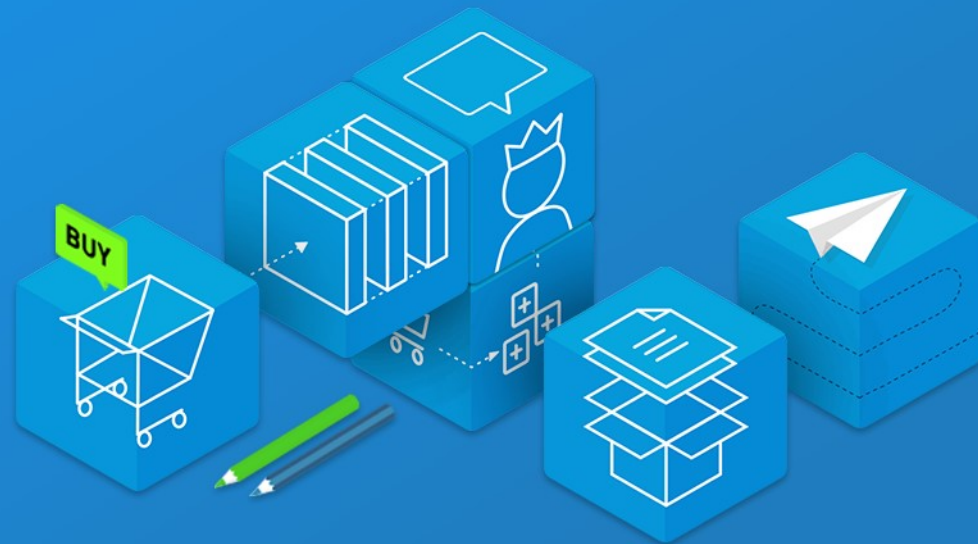
Frontends



Architecture & Features



SAP Hybris as a service (YAAS)



Why YaaS?

*„Digitale Transformation heißt nicht, dass ich jetzt sehen muss, wo die Reise hingeht, und mich dafür neu aufstelle.
Digitale Transformation bedeutet, dass ich gar nicht wissen kann, wo der Markt in 3/5/10 Jahren stehen wird - deshalb muss ich mich so aufstellen, dass ich flexibel reagieren kann auf was auch immer passieren wird.“*



Clayton Christensen ✓
@claychristensen

 Follow



The worst place to develop a new business model is from within your existing business model.

RETWEETS
1,169

LIKES
1,052



5:53 PM - 9 Feb 2016

Microservices in the Cloud



Installation
System requirements
RfP process
Upfront license cost

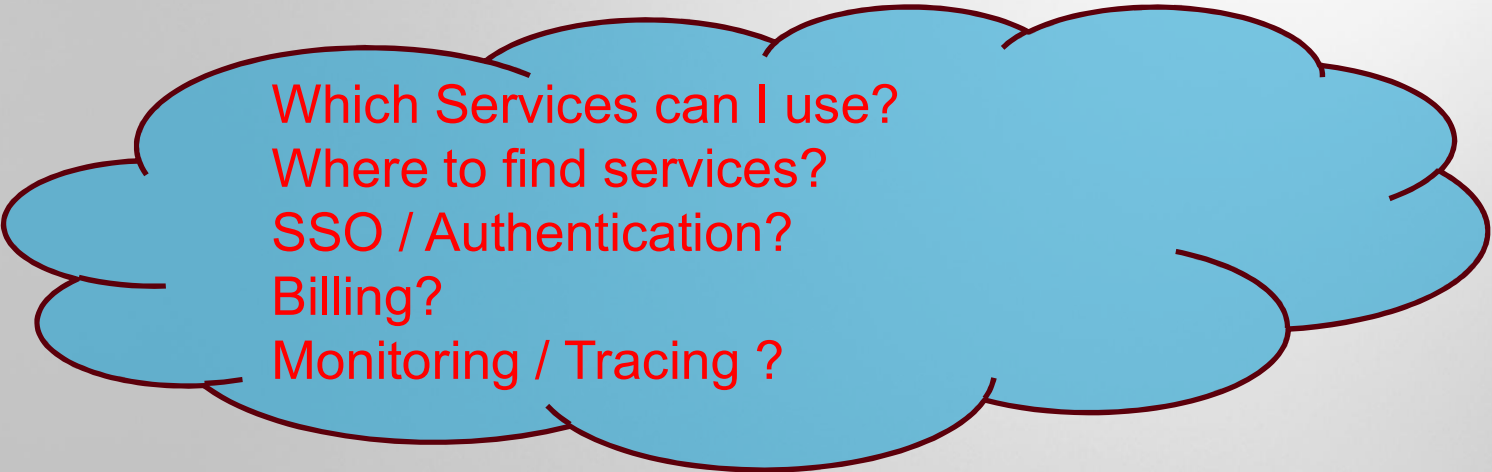


Call a URL
Elastic Scaling
Low-touch, self-service
Metered billing

YAAS - Platform

IaaS : Give me a VM!

PaaS: Here's a jar file, run that!



Which Services can I use?
Where to find services?
SSO / Authentication?
Billing?
Monitoring / Tracing ?

SaaS: Ready-to-use software

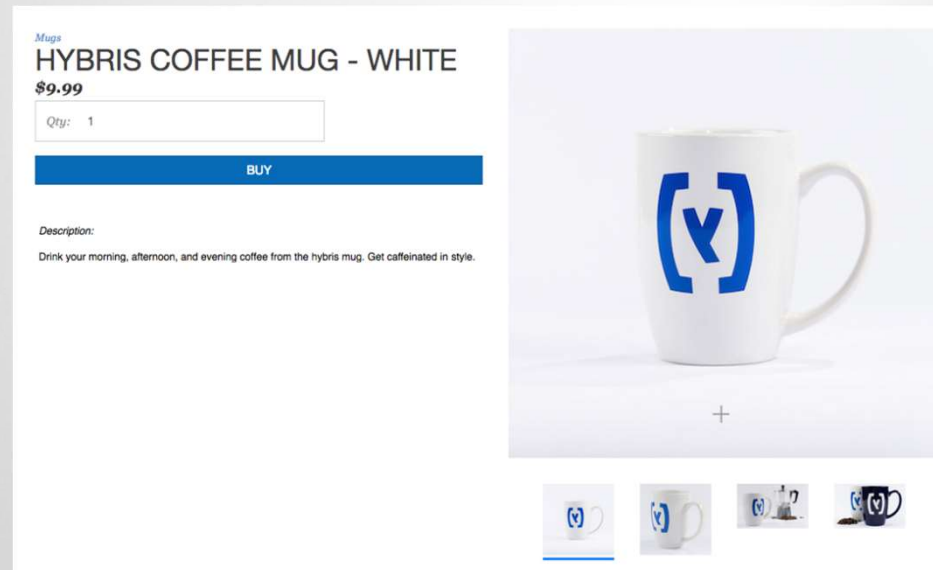
What is YaaS?

YAAS - Services

- Core Services
- **Commerce as a Service**
- Loyalty
- Profile
- ...



Storefront



- Single-Page App -> no Appserver
- AngularJS
- Services integrated via client-side config file

Einstieg in YAAS – yaas.io

SAP Hybris (v)

Worldwide (Beta) 

What's New



Product Content (Beta)

The Product Content package supports back-office management tasks allowing you to display, and search within, product data.

TRY IT



Profile Services for Loyalty

Profile Services for Loyalty adds loyalty specific information to SAP Hybris Profile, enabling the marketer to get additional insights.

TRY IT



Persistence (Beta)

The Persistence Package is a bundle of important baseline services needed to store and access all kinds of data.

TRY IT

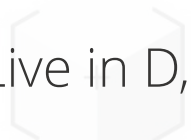


Dev Portal with complete documentation

SORT 

Free beta instance for testing

Live in D, USA, CH, UK



Using YaaS Services

Discovery

-> (currently unstructured) catalog

SLA

-> Depending on service

Tools

-> z.B. Generate client from RAML

Authentication

-> Oauth-Service

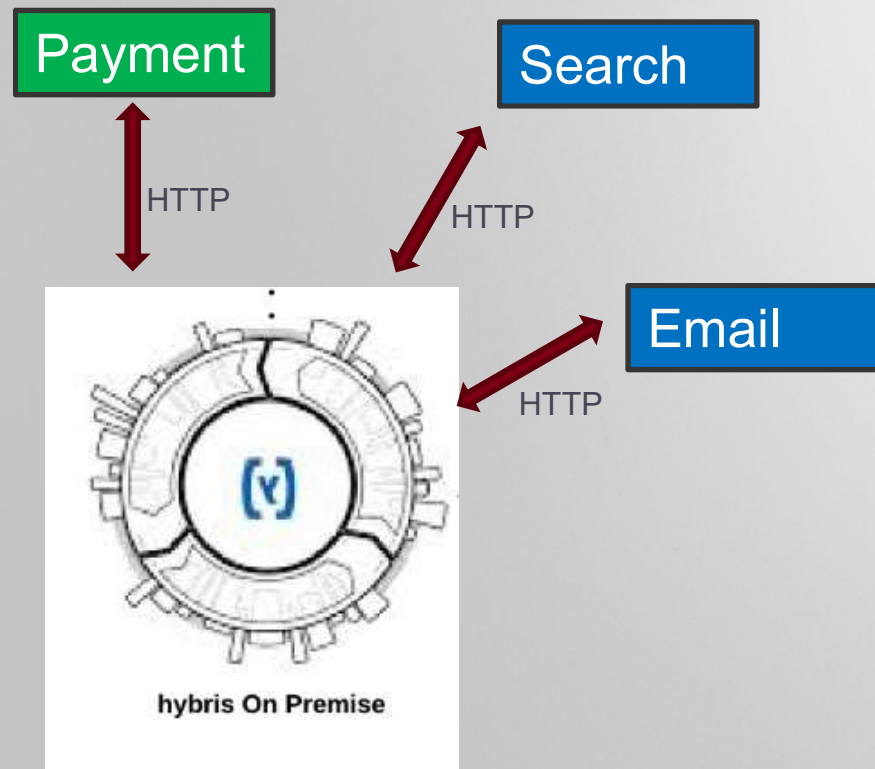
Monitoring

-> currently basic

Target Architectures

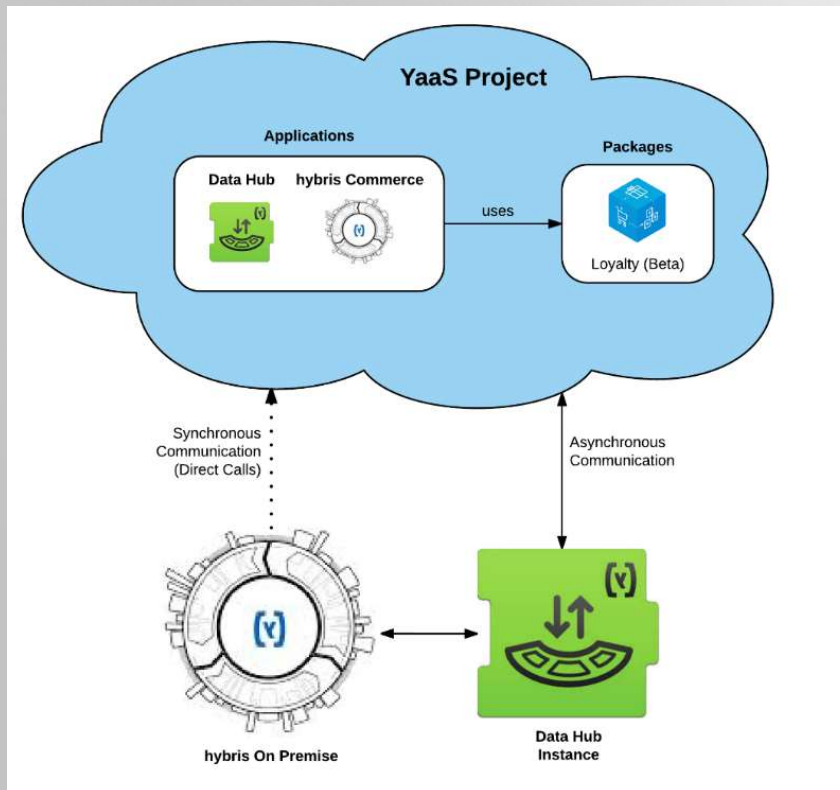


Scenario 1: „Normal“ hybris



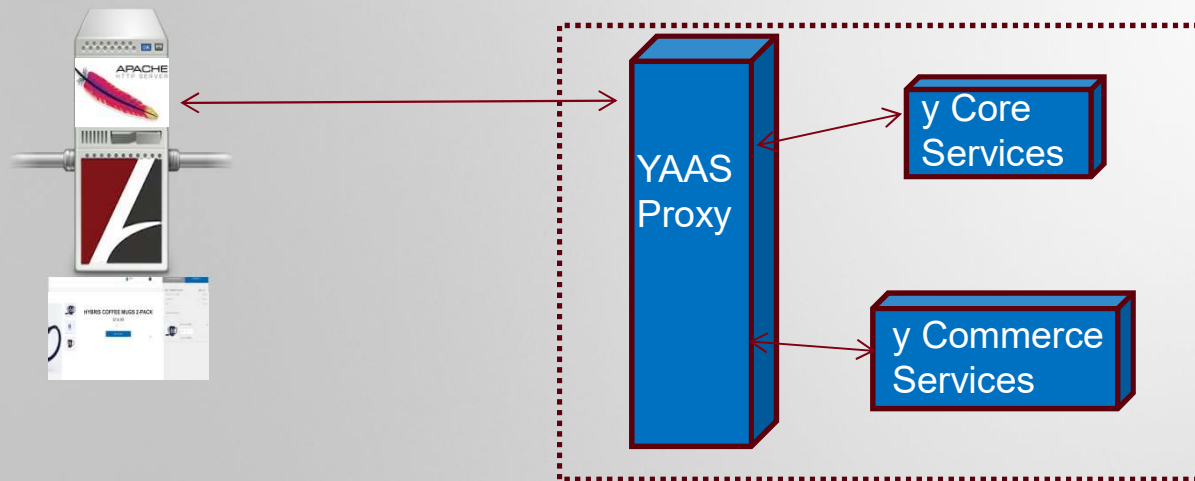
- „normal“ Hybris commerce
- Uses external APIs – on YAAS or elsewhere

Scenario 2: y commerce + YaaS



- „normal“ Hybris commerce
- Enriched using services on YaaS
- HTTP-Calls just like any other API
- Data Sync using Datahub

Scenario 3: Pure YaaS

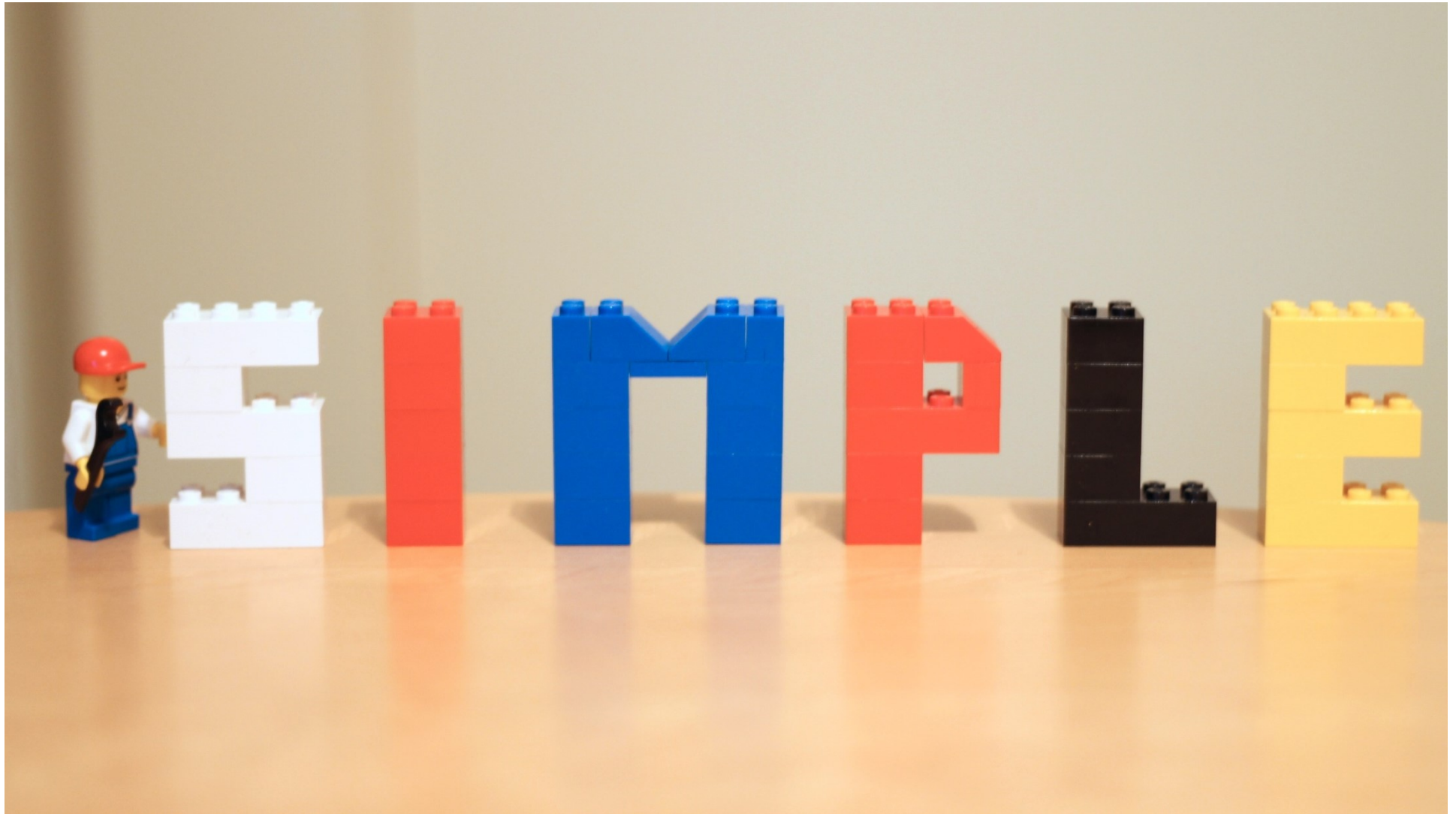


- Customized YaaS SPA Frontend
- YaaS services backend

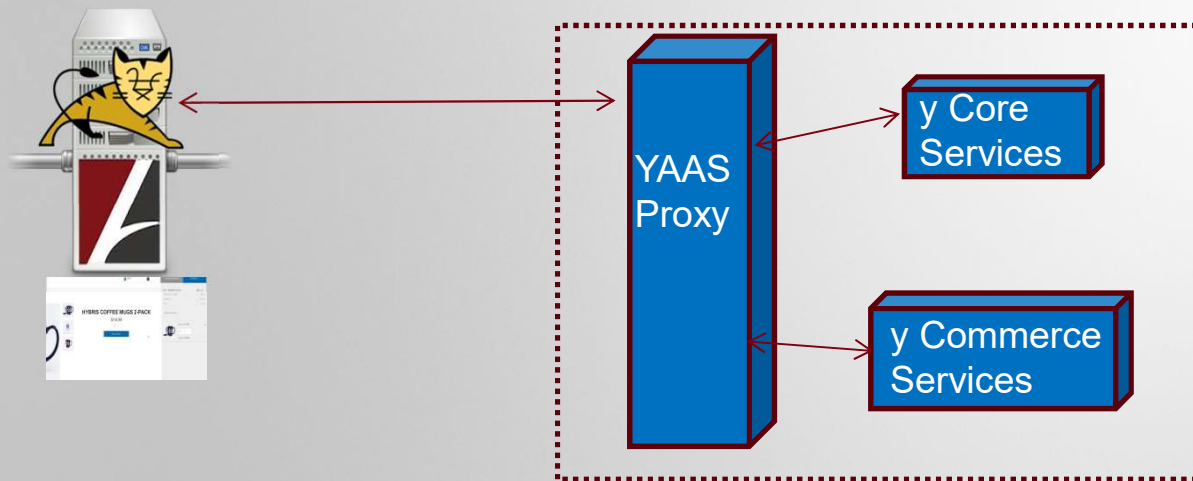
Performance?
Latency?
Availability?
Reliability?

Logging?
Monitoring?
Tracing?
Metrics?



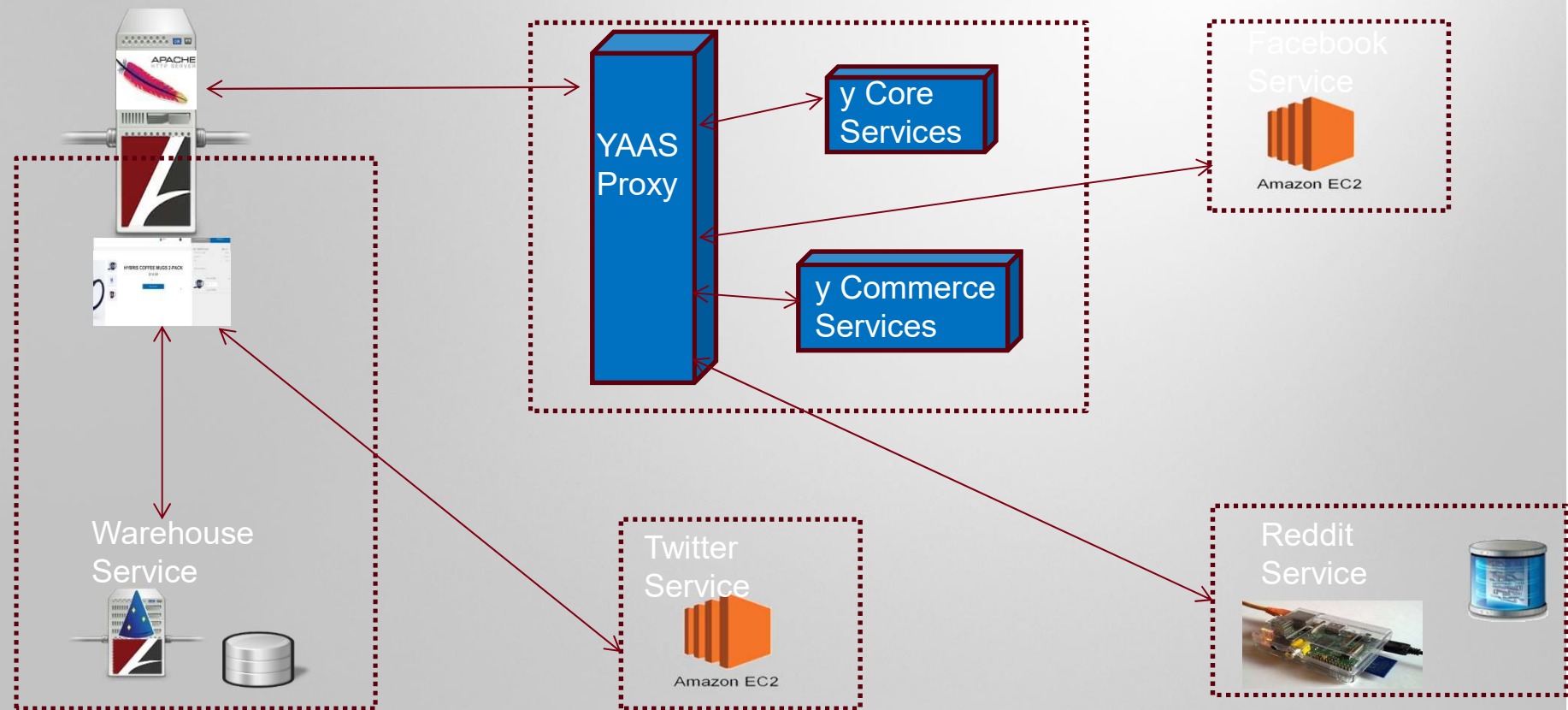


Scenario 3: MVP YAAS



- „Classic“ Tomcat/Spring Boot Backend-for-Frontend
- YaaS services backend
- YaaS persistence

Scenario X: Maximum YaaS



Development

Development example: Extending the product model



Extending the product model: hybris commerce

```
<itemtype code="FooProduct" extends="Product">
  <attributes>
    <attribute qualifier="seoName"
      type="java.lang.String" >
      <modifiers optional="false"/>
    </attribute>
    <attribute qualifier="surcharge"
      type="java.lang.Double">
```

Extending the product model: hybris commerce

- Items.xml, beans.xml integrated over all extensions
- Full validation etc
- Hybris services not aware
- But extend/overwrite to make them aware

YaaS: Open for extension

- Mixins : add custom attributes to a record
- Plugins : configure your choice of 3rd-party service in a yaas service
- Mashups : Facade-Service using several yaas services
- Events : subscribe via PubSub-Service



Extending the product model: YaaS

- Mixins: On instance only
- Product service validates against schema
- Other services not aware of mixins
- Own service as plug-in service – where supported
- Good for small, occasional extensions

Development example: Custom shipping cost calculation



Custom shipping costs: hybris commerce

```
<alias alias="findDeliveryCostStrategy",  
name="fooDeliveryCostsStrategy" />  
  
<bean id="fooDeliveryCostsStrategy"  
class="de.arithnea.strategies.FooDeliveryCostsStrategy" />
```

```
public class FooDeliveryStrategy implements FindDeliveryCostStrategy {  
    public final PriceValue findDeliveryCosts(...) {  
        return doWhateverCrazyComplicatedLogicWeNeed();  
    }  
}
```

Custom shipping costs: yaas

- Shipping service
 - Zones („Germany“)
 - Methods („DHL parcel“ -> 6,90 Euros)
- Built-in logic: price by minimum order value
- No custom logic
- But: can use own service...
- ... where API allows

YaaS Use Cases

**Extending an
established online shop**

Scenario: Extending an established online shop

Example: Dynamic Prices determined by stock level

Extending an established online shop : Painpoints

Pricing handled by ERP system

- bi-yearly release cycle
- coupled to all other ERP development
- costly customization



Bestehende Shoplösung erweitern mit YAAS



Export to YaaS via y2y-sync

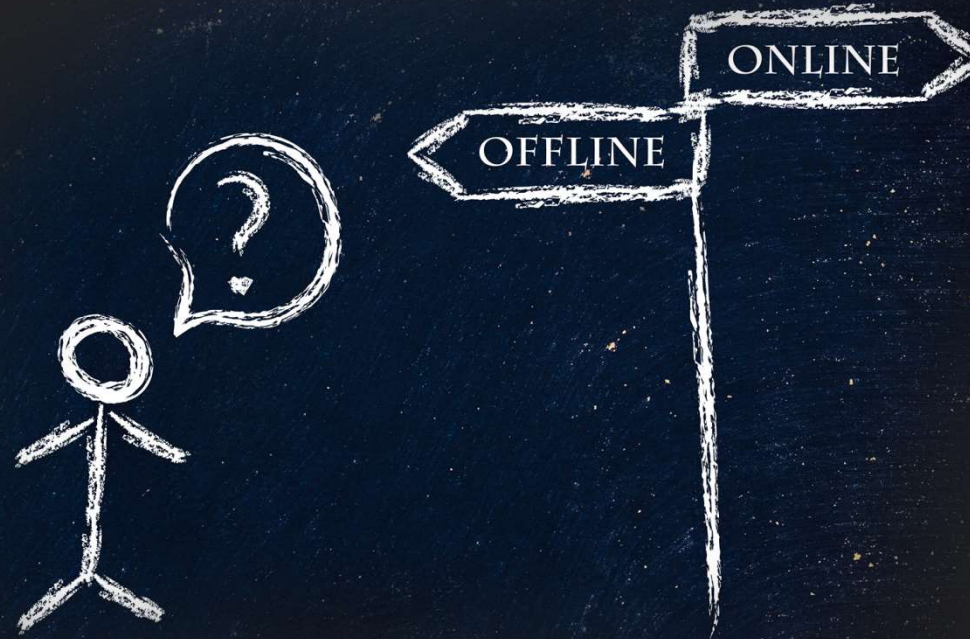
New pricing logic as a separate microservice

Monolith + calls out to microservices

Intro to new architecture

Social Selling

Scenario: Social Selling

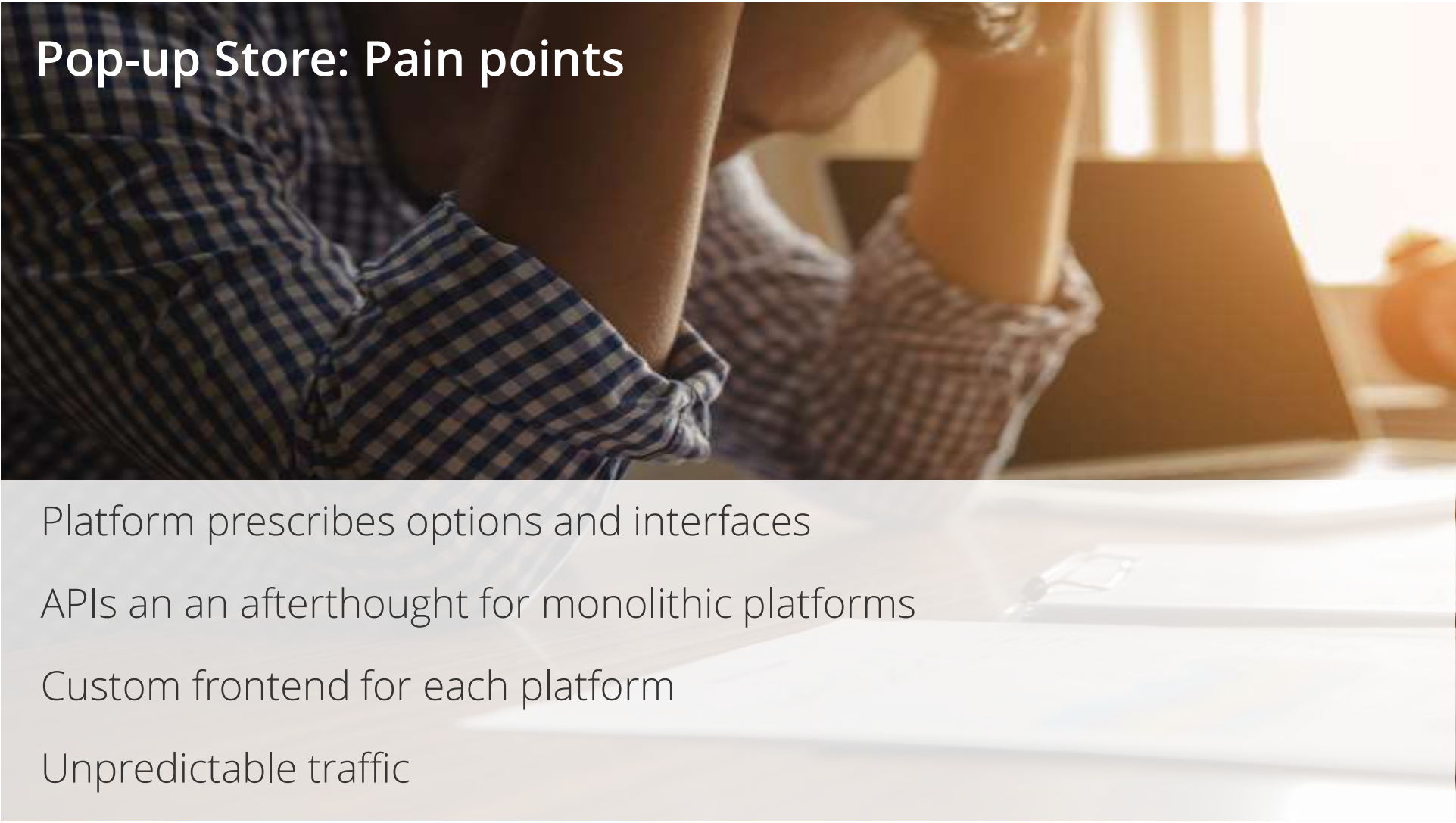


Omnichannel used to mean: Bricks&Mortar + Online

Use Case: Social Selling

2017: Omnichannel =
Store + Online shop + iPhone-App +
Android-App + facebook page + Instagram +
Amazon + Snapchat Stories +



A person wearing a blue and white checkered shirt is sitting at a desk, working on a laptop. The room is warmly lit, likely by natural light from a window, creating a soft, golden glow. The person's head is bowed, focused on the work. The background is slightly blurred, showing a desk with some papers and a small orange object.

Pop-up Store: Pain points

Platform prescribes options and interfaces

APIs an an afterthought for monolithic platforms

Custom frontend for each platform

Unpredictable traffic

Social Selling with YAAS



Product
Content



Personalization
Loyalty
Management



Promotions &
Coupon
Management



Cart
Checkout
Payments



Order
Management

Scenario: Pop-up Store



Quick launch • Low investment
Short lifetime • Few, simple products



Pop-up Store: Pain points

No time for requirements & sales process

No time to wait for internal IT & infrastructure

Peak demand, but short-term • No ROI of fixed cost licenses

Pop-up Store with YaaS

Sign up & Start • No long-term commitment
No upfront investment for license or hardware
Unlimited scaling • Flexible building blocks

Pop-up Store Example: Superbowl 50 Fund



The future is unevenly distributed



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www.arithnea.de

Future / Outlook / Open issues



Microservices project vs. platform

- REST vs Choice of REST, Thrift, ProtoBufs,...
- Circuit Breaker: Instances transparent, fallback?
- Logging: SaaS -> dont need. Internal -> Call Devs. YaaS?
- Tracing: Correlation ID over interan + external services?
- Monitoring: alive, health, stats
- Testing support: stubs, client libraries

Microservices projects

- Continuous Delivery vs Customer acceptance?
- Cross-project services?
- Platform team / macro architecture

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