

BUILDING COMMERCE TOOLS EXTENSIONS

 **nvizion**
SOLUTIONS
**Passionate About
Digital Commerce**

 **commercetools**
Next generation commerce

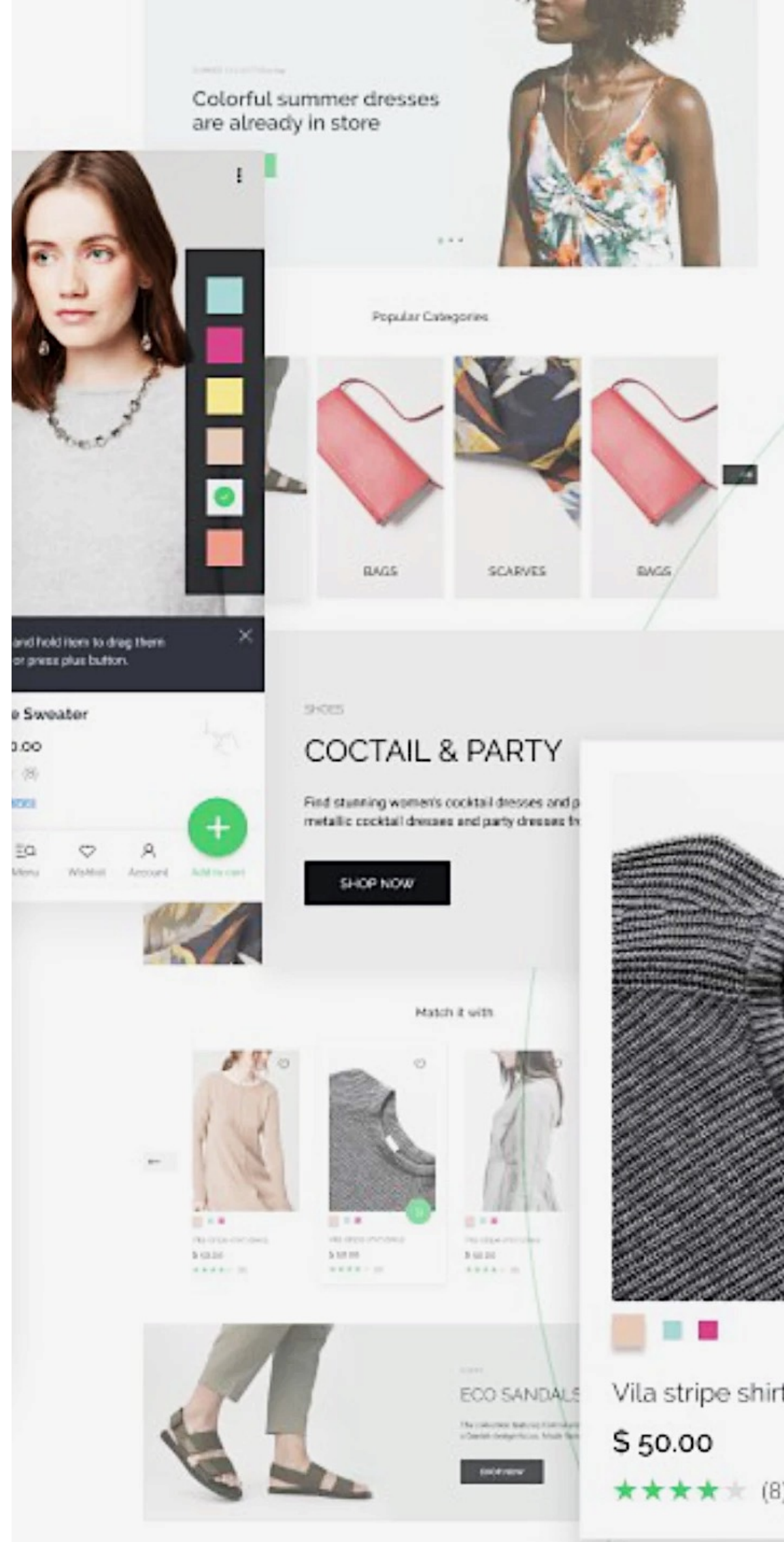


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ABOUT COMMERCETOOLS EXTENSIBLE FEATURES

- commercetools is dynamically extensible ecommerce solution framework which provides highly customizable cloud native business solutions.
- commercetools provides two features for serving customizable business uses cases
 - commercetools Customization
 - commercetools Extension



CUSTOMIZATION OR EXTENSION?

It is very important to understand what is suitable to fulfil business requirement.

Customization

- Commercetools solution achieved with leveraging features to define Custom Field and Custom Objects to enhance behavior of OOTB commerce objects.
- To achieve simpler Business use case.

Extension

- Extension refers to integrating solution which runs externally from CommerceTools framework.
- To achieve more complex business use cases.
- There are two ways to develop extension
 - CommerceTools Marketplace extension
 - Custom API/Service hosted externally



EXAMPLE: BUSINESS USE CASE

Customization

- To Add Personalization or display most relevant products based on customer's preferences.
- **Solution** - For Wine Ecommerce Website, providing personalized experience for customers can be achieved with following customization
 - Add custom fields on Customer resource to hold wine preferences.
 - Using these preferences , relevant search result or wine recommendations can be displayed to customer.

Extension

- Validate Cart eligibility for upsell options.
- Validate Shipping compliance for order items.
- Add gift item to cart automatically when eligible item is added to cart.
- Integrate Avatax for Tax calculations.
- Send order confirmation email once order is created in commerce tools platform.



CUSTOM SERVICE EXTENSION

- CommerceTools provides MACH based framework which add flexibility to customize and serve different business use cases.
- Ecommerce business is highly competitive in fast moving world and always in pressure to deliver in short time span, provide scalable , low maintenance , customizable online brand store.
- Custom extension allows to achieve business requirements with all competitive factors and allows to build external solution which can be integrated to commerce tools API execution or on occurrence of any event in the system
- Below are two options -
 - API Extension – Synchronous Execution
 - Subscriptions – Asynchronous Execution



WHAT IS API EXTENSION?

- Provides ability to extend behavior of commercetools API with custom implementation.
- Allows to modify OOTB API response based on customization.
- Run external to commerce tools platform.
- Synchronous execution.
- Runs before CRUD operation is performed on any entity and persist it based on output of customization.



CT EXTENSION VS MONOLITHS EXTENSION

CT EXTENSION	MONOLITHS EXTENSION
Easy to write and integrate extension	Complex logic to write and integrate extension.
No restriction on programming language to create extension.	Extension needs to be created in framework programming language.
Serverless extension.	Need to host extension of application server.



USE CASES OF API EXTENSION

Example for business use cases



Validate Cart
eligibility for
upsell options.



Validate
Shipping
compliance for
order items.



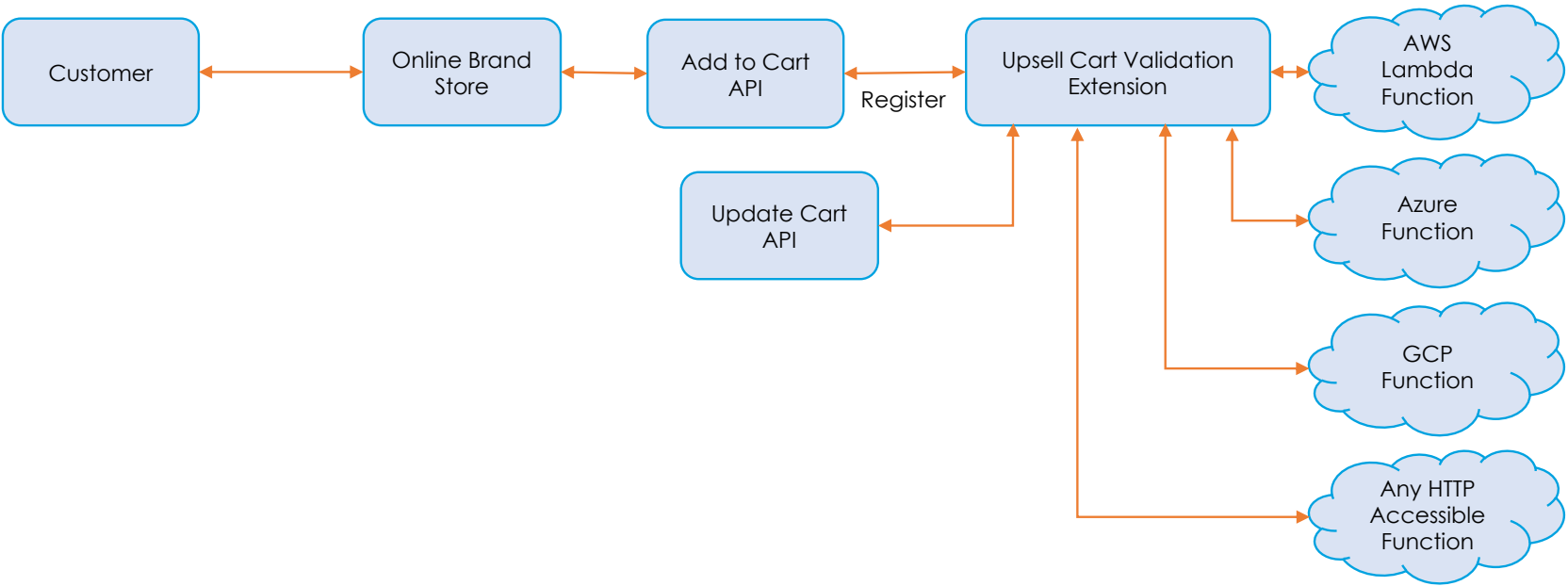
Add gift item to cart
automatically when
eligible item is
added to cart.



VALIDATE CART ELIGIBILITY

For Upsell Options

Validate Cart for Upsell			
End User	Business	commercetools	FAAS Providers (Functions for Validations Business Logic)



Business Requirement:
To perform cart eligibility validations for upsell option.

- Solution:**
1. Create CT Extension
 2. Register extension for create and update cart actions.
 3. Create function for business validations which are accessible over HTTP. For eg., AWS Lambda Function, Azure function, GCP etc.
 4. CT Extension invokes these functions and based on validation response commerce item persisted by CT API.



CODE SNIPPET FOR AZURE EXTENSION

Register Extension on Create and Update Cart actions.

```
{
  "destination": {
    "type": "HTTP",
    "url": "https://test.azureweb.net/api/upsell-eligibility-extension ",
    "authentication": {
      "type": "AzureFunctions",
      "key":
"BMLuaTml0P1OwhTlqta1qEjzJFYD01jGmjua8imHR7R0kaM9GRAaYA=="
    }
  },
  "triggers": [
    {
      "resourceType": "cart",
      "actions": ["Create", "Update"]
    }
  ],
  "key": "upsell-eligibility-extension "
}
```



CODE SNIPPET FOR AZURE EXTENSION

Azure Function

Create Azure Function to perform Upsell business validations on cart.

URL : <https://test.azureweb.net/api/upsell-eligibility-extension>

Refer links to understand in detail about Azure functions

<https://learn.microsoft.com/en-us/azure/azure-functions/>



WHAT IS SUBSCRIPTION?

- This is Business solution developed externally allows to trigger in response to an event occurrence in commerce tools platform.
- Asynchronous processing
- It can be achieved with below queue service options
- AWS SQS ,AWS SNS ,AWS EventBridge
 - Azure Service Bus , Azure Event Grid
 - Google Cloud Pub/Sub



USE CASES OF SUBSCRIPTION



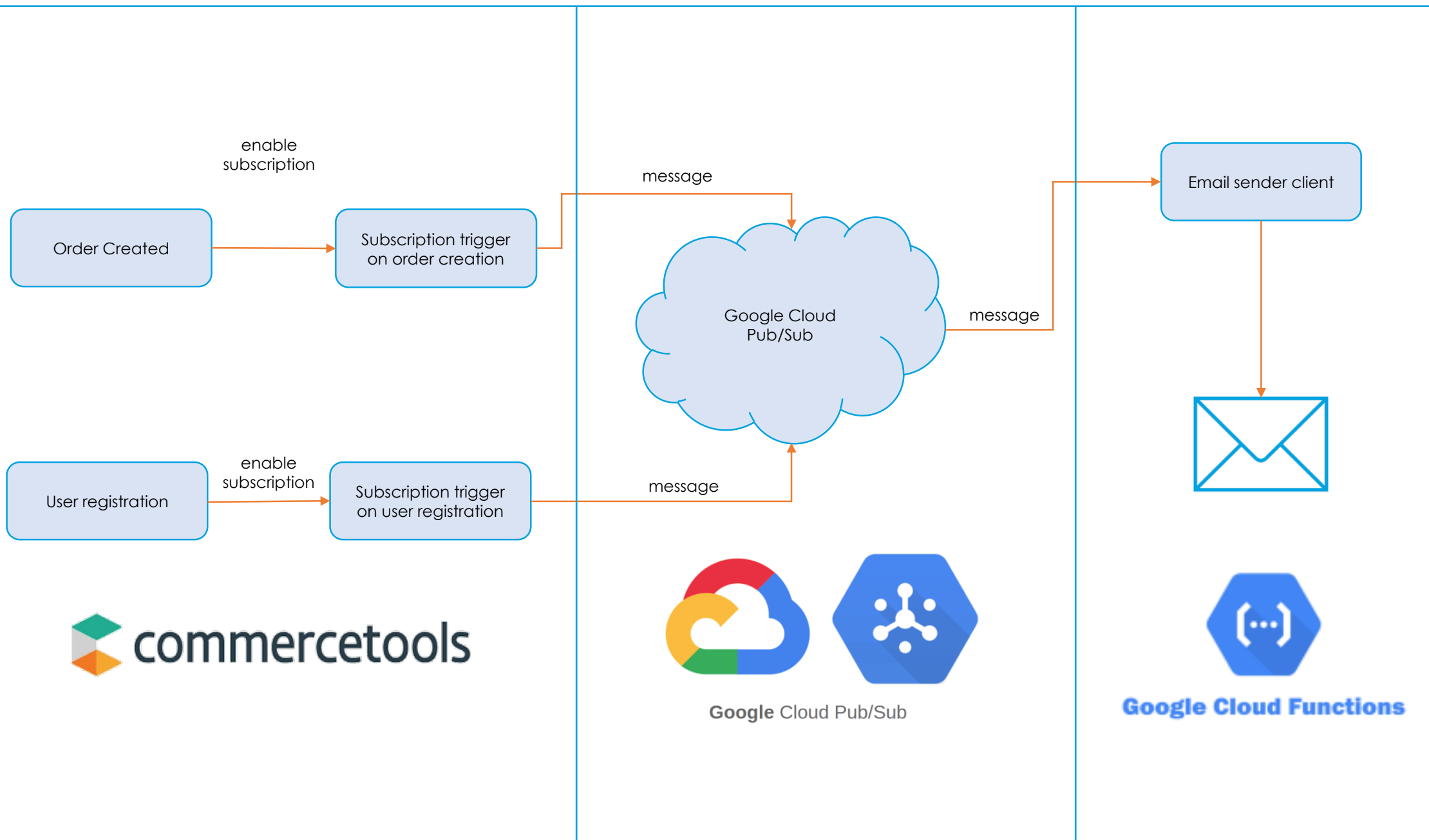
Send Registration email
to customer when
registered on website.



Send Order confirmation
email when order is
created on website.



SUBSCRIPTION FLOW



WHAT'S NEXT

Case Studies

We transform the way people interact with your brand. Learn how we implemented a more modern and globally inclusive omnichannel shopping experience for the world class companies.

[*Read our customer stories here.*](#)

Blogs & Insights

Looking for resources, tools, tips and industry news? Stay ahead of the curve with quick access to our thought leadership and expert insights on digital transformation.

[*Get more insights on digital transformation.*](#)



ABOUT US

Nvizon Solutions and commercetools

Nvizon Solutions partners with commercetools to deliver seamless shopping experience with a modern commerce approach. commercetools is a Next Generation Partner that offers true Composable Commerce Platform. Its leading-edge API approach helps retailers create brand value by designing unique and engaging digital commerce experiences across all touchpoints like web, mobile, voice, and in-car.

The agile, componentized architecture improves profitability by significantly reducing development time and resources required to migrate to modern commerce technology and meet new customer demands.

[Learn how you can benefit from commercetools and Nvizon Solutions partnership.](#)

For more information contact us at sales@nviz.com

