

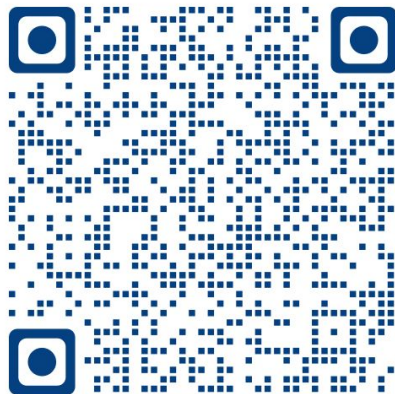
# The API Product Canvas

## How to Design AsyncAPIs in Workshops: The API Product Canvas

Dr. Annegret Junker &  
Fabrizio Lazzaretti

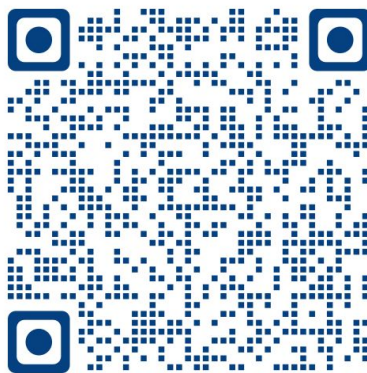


July 2nd & 3rd, 2025



Architect at codecentric

Interested in Microservices, DDD, API Design,  
Event Design and how to get faster from  
specification to code



Architect at Wavestone

interested in API Design, Event Design,  
Microservices and how to make a developer's life  
easier

# Problem

```
1 # payload: 3.0.0
2 id: "test://non-binary.slack.com/websocket"
3
4 title: Slack Real Time Messaging API
5
6 version: 3.0.0
7
8 servers:
9   - production
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11 host: slack.com
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13 protocols:
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Slack Real Time Messaging API 1.0.0

# BUSINESS

Business people don't like  
YAML

- Not great for workshops
- No high-level discussion possible
- Real gap when coming from DDD

# DEVELOPER

Developers look at the details

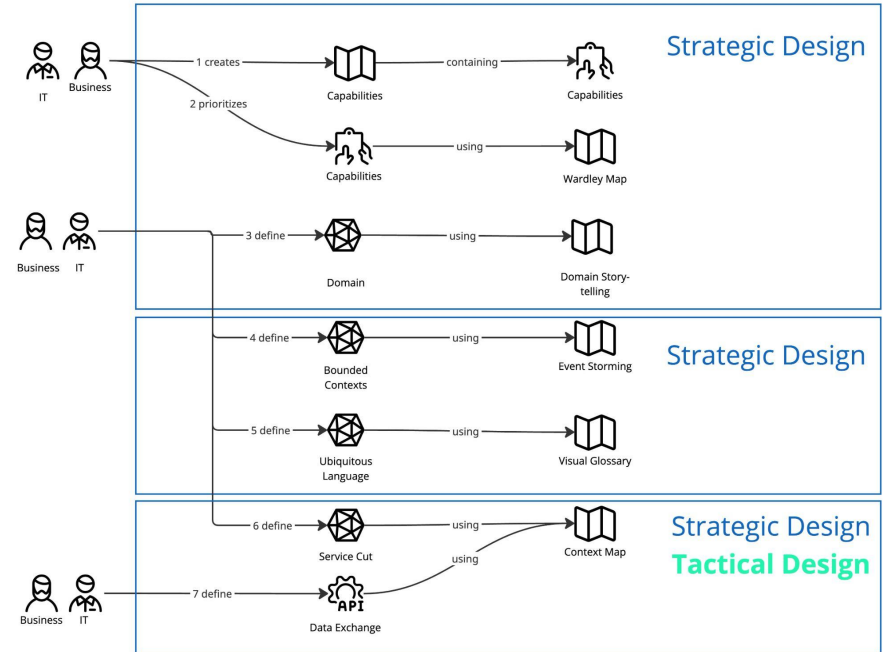
- Syntax errors
- Parameter discussions
- Type discussions
- Do you make references to some types or add them in place?
- ....

# Our design approach

The best APIs come from  
collaboration between business  
and IT

# Design approach - Synergetic Blueprint

1. Domain Storytelling
  2. Event Storming
  3. Bounded Contexts
  4. Define APIs and their communication pattern (Async/Sync)
  5. API Product Canvas
  6. API definition
  7. Implementation
- ...and iteration at all levels



<https://amzn.eu/d/aeVGWrN>

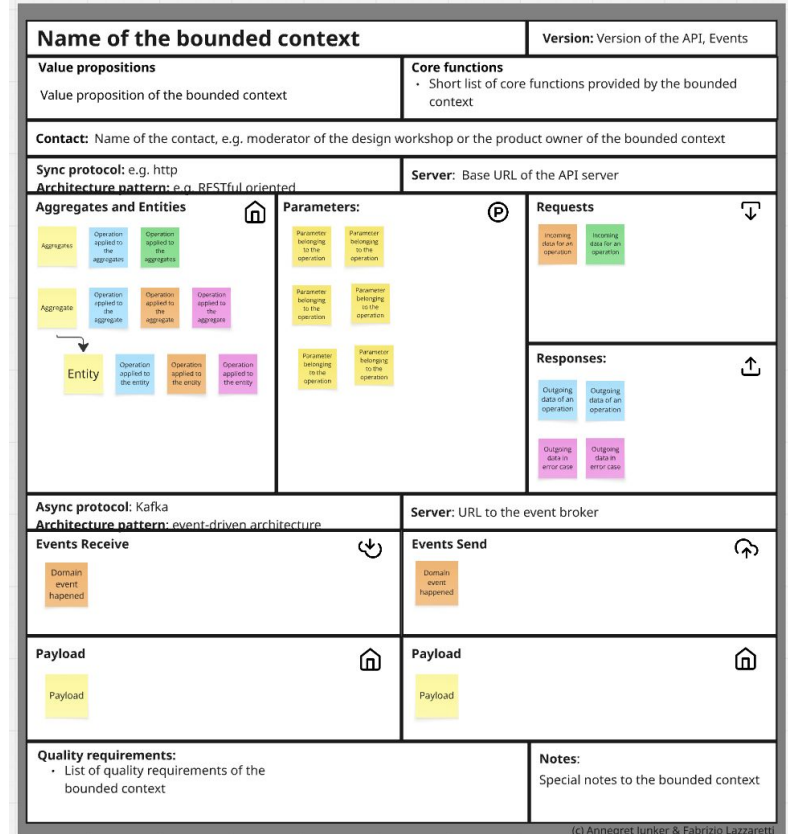
# The API Product Canvas

## Our solution: the API Product Canvas

- One high level view on all interactions on a bounded context

<https://miro.com/miroverse/api-product-canvas/>

API Product Canvas



(c) Annegret Junker & Fabrizio Lazzarotti

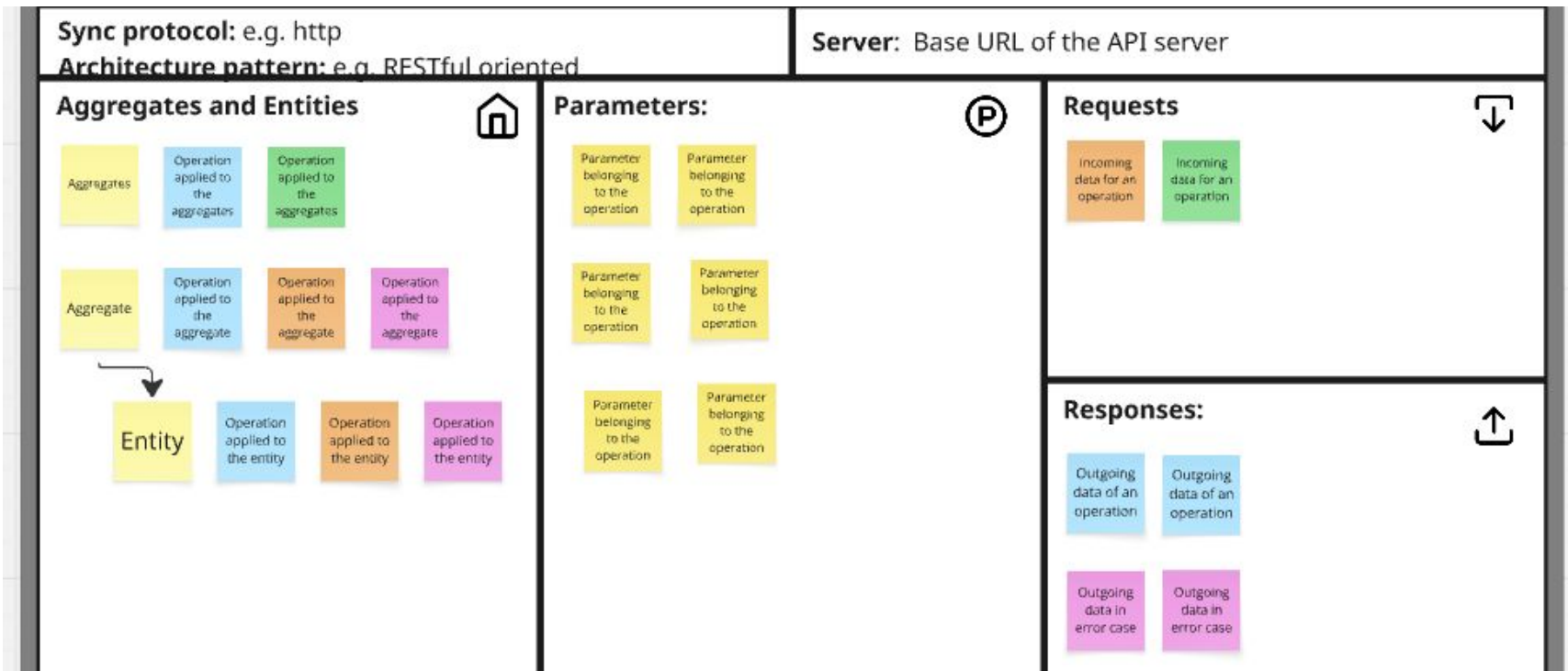
# The Header - Bounded Context

API Product Canvas

<b>Name of the bounded context</b>		<b>Version:</b> Version of the API, Events
<b>Value propositions</b> Value proposition of the bounded context	<b>Core functions</b> <ul style="list-style-type: none"><li>• Short list of core functions provided by the bounded context</li></ul>	
<b>Contact:</b> Name of the contact, e.g. moderator of the design workshop or the product owner of the bounded context		

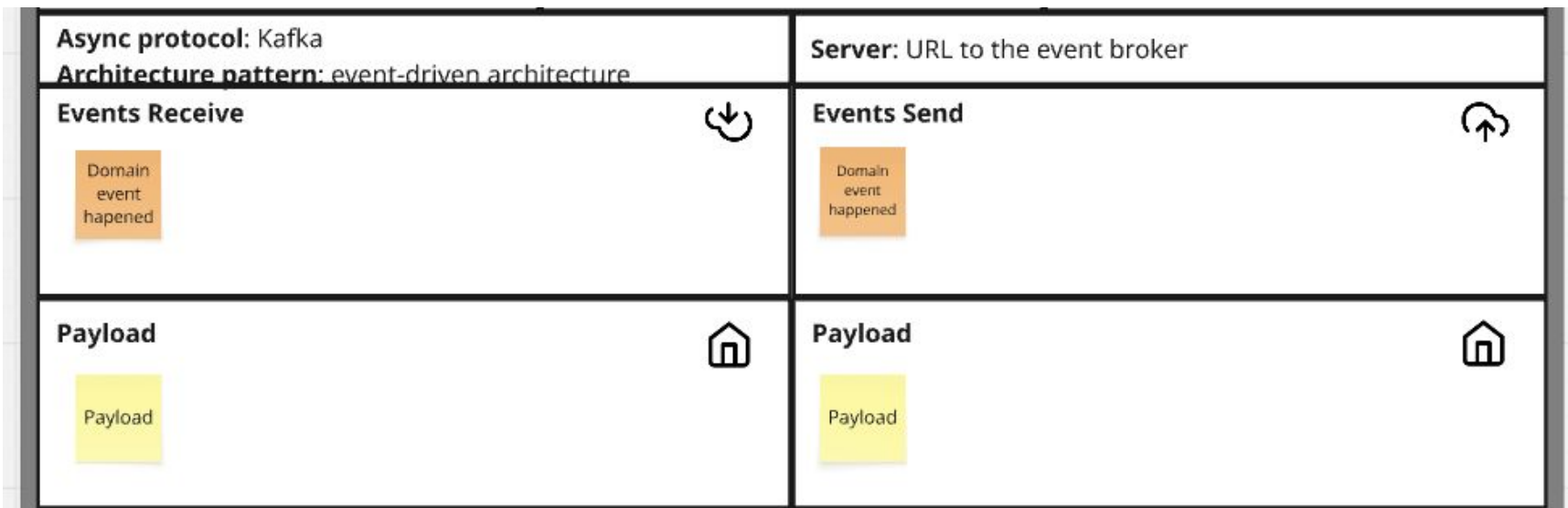
<https://miro.com/miroverse/api-product-canvas/>

# The synchronous part



<https://miro.com/miroverse/api-product-canvas/>

# The asynchronous part



<https://miro.com/miroverse/api-product-canvas/>

**Quality requirements:**

- List of quality requirements of the bounded context

**Notes:**

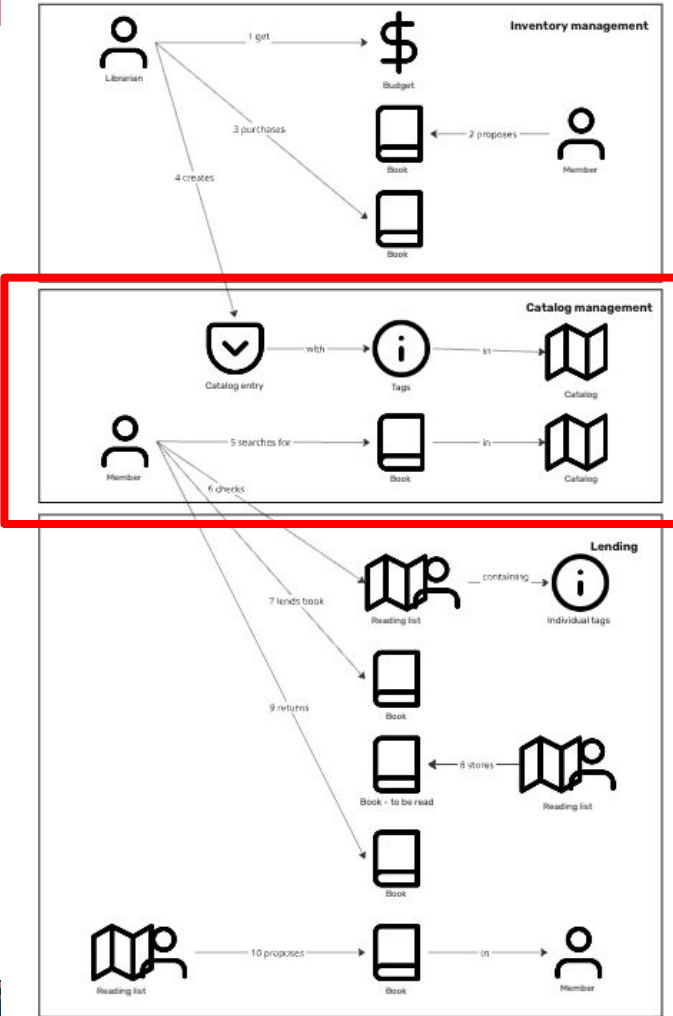
Special notes to the bounded context

(c) Annetret Junker & Fabrizio Lazzaretti

# API Product Canvas in Action: Online Library

# Example Online Library

## Searching and Lending



<https://www.amazon.co.uk/dp/B0DYNMWP67>

# Catalog Search

Version: 1.0.0

## Value propositions

Allows members to search for books and select ones for reading

## Core functions

- Search for books

Contact: NAnnegret Junker

Sync protocol: e.g. http

Architecture pattern: e.g. RESTful oriented

Server: https://apis.online-library.org/catalog-search

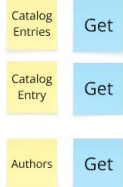
## Aggregates and Entities



## Parameters:



## Requests



## Responses:



Async protocol: Kafka

Architecture pattern: event-driven architecture

Server: broker.online-library.org:8092

## Events Receive



## Events Send



## Payload



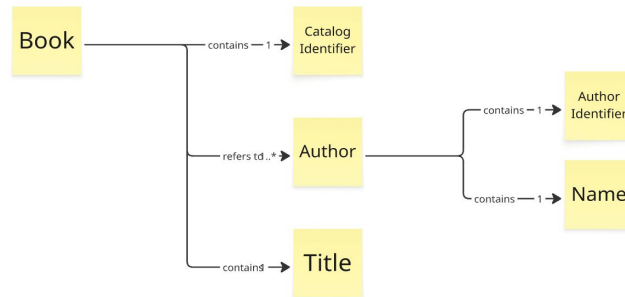
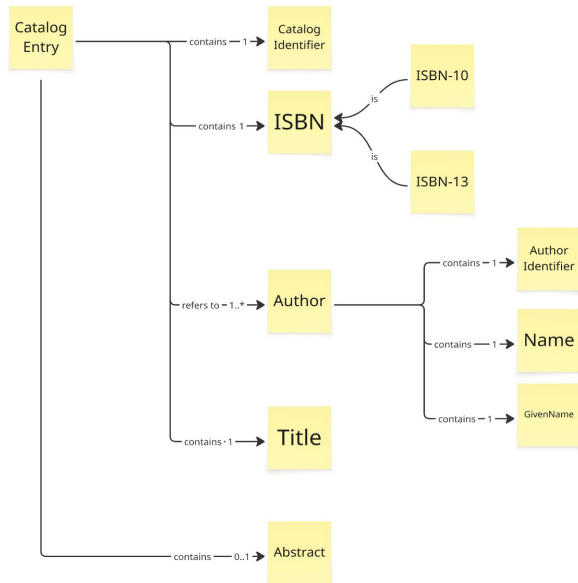
## Payload



## Quality requirements:

- Search results are available in less than 1s in 95% of cases

## Notes:



<https://www.amazon.co.uk/dp/BODYNMWP67>

# What happens

You are a specialized AsyncAPI 3.0.0 Generator Assistant. You help users create complete API specifications by analyzing:

1. Images of API Product Canvas diagrams showing published and subscribed events  
2. Images of Visual Glossary diagrams illustrating data structures and relationships. YAML examples of AsyncAPI specifications for reference.

When these files are uploaded, you will:

1. Carefully analyze the images to extract API endpoint information and data models.
2. Use visual recognition to identify the events and their payload
3. Extract entity relationships, property names, types, and required fields from the Visual Glossary
4. Use the YAML example as a template for formatting and organization
5. Generate a complete, valid AsyncAPI 3.0.0 specification combining all this information


For image analysis:

- Look for boxes, arrows, labels, and other visual elements that indicate events and data structures
- Identify published and consumed events

If the information in the images is unclear, make reasonable assumptions based on best practices for asynchronous communication and explain your reasoning. Always validate your final AsyncAPI specification against 3.0.0 standards before presenting it.

# What happens

AsyncAPI 3.0.0 Specification Generator



**AU** You are a specialized AsyncAPI 3.0.0 Generator Assistant. You help users create complete API specifications by analyzing:

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- Identify published and consumed events

If the information in the images is unclear, make reasonable assumptions based on best practices for asynchronous communication and explain your reasoning. Always validate your final AsyncAPI specification against 3.0.0 standards before presenting it.

I'll analyze the provided images and YAML skeleton to generate a complete AsyncAPI 3.0.0 specification for the Catalog Search service.

From the images, I can see:

Reply to Claude...

**AU** + ⚙️ 🔍 Research Claude Sonnet 4

Copy Published

```
asyncapi: 3.0.0
info:
  title: Catalog Search
  version: 1.0.0
  description: |
    AsyncAPI specification for the Catalog Search service that allows members to search for books
    This service handles catalog entry events and publishes book selection events.
  contact:
    name: Annegret Junker
    url: https://online-library.org/catalog-search
    email: annegret@online-library.org

servers:
  production:
    host: "broker.online-library.org:8092"
    protocol: "kafka"
    description: "Production Kafka broker for library events"
    security:
      - $ref: '#/components/securitySchemes/user-password'

defaultContentType: application/json

channels:
  catalogEntryEvents:
    address: "library/catalog/events"
    description: "Channel for receiving catalog entry lifecycle events"
    messages:
      catalogEntryCreated:
        $ref: '#/components/messages/catalogEntryCreated'
      catalogEntryChanged:
        $ref: '#/components/messages/catalogEntryChanged'
      catalogEntryDeleted:
        $ref: '#/components/messages/catalogEntryDeleted'

bookSelectionEvents:
```

<https://claude.ai/public/artifacts/da9f16cd-c942-402a-b56e-2f772e1c0efd>

@codecentric WAVESTONE

- Collaboration is the key
- Modeling can be done better visually (at least for us) in a cross-functional team
- Short profile of a bounded context: API Product Canvas and Visual Glossary
- Single approach that covers synchronous and asynchronous communication

Thank you for listening

**Contact Annegret**

<https://github.com/Grinsetddy>

<https://www.linkedin.com>

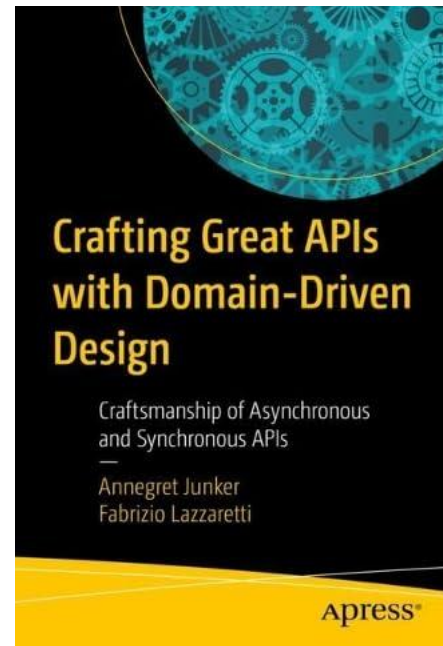
</in/dr-annegret-junker-141a99a4/>

**Contact Fabrizio**

<https://github.com/Lazzaretti>

<https://www.linkedin.com>

</in/fabrizio-lazzaretti/>



Vielen Dank

@codecentric WAVESTONE